



6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA-R06-OAR-2015-0189; FRL-9998-66-Region 6]

Approval and Promulgation of Implementation Plans; Arkansas; Approval of Regional Haze State Implementation Plan Revision for Electric Generating Units in Arkansas

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: Pursuant to the Federal Clean Air Act (CAA or the Act), the Environmental Protection Agency (EPA) is finalizing an approval of a portion of a revision to the Arkansas State Implementation Plan (SIP) submitted by the State of Arkansas through the Arkansas Department of Environmental Quality (ADEQ) that addresses certain requirements of the CAA and the EPA's regional haze rules for the protection of visibility in mandatory Class I Federal areas (Class I areas) for the first implementation period. The EPA is taking final action to approve, among other things, the state's sulfur dioxide (SO₂) and particulate matter (PM) best available retrofit technology (BART) determinations for electric generating units (EGUs) in Arkansas and the determination that no additional SO₂ and PM controls at any Arkansas sources are necessary under reasonable progress. In conjunction with this final approval of a portion of the SIP revision, we are finalizing in a separate rulemaking, published elsewhere in this issue of the **Federal Register**, our withdrawal of the corresponding Federal implementation plan (FIP) provisions established in a prior action to address regional haze requirements for Arkansas.

DATES: This rule is effective on [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: The EPA has established a docket for this action under Docket No. EPA-R06-OAR-2015-0189. All documents in the dockets are listed on the <http://www.regulations.gov> Web site. Although listed in the index, some information is not publicly available, *e.g.*, Confidential Business Information or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically through <http://www.regulations.gov> or in hard copy at the EPA Region 6, 1201 Elm Street, Suite 500, Dallas, Texas 75270-2102.

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SUPPLEMENTARY INFORMATION: Throughout this document “we,” “us,” and “our” means the EPA.

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I. Background

A. The Regional Haze Program

Regional haze is visibility impairment that is produced by a multitude of sources and activities that are located across a broad geographic area and emit fine particulates (PM_{2.5}) (e.g., sulfates, nitrates, organic carbon (OC), elemental carbon (EC), and soil dust), and their precursors (e.g., SO₂, nitrogen oxides (NO_x), and in some cases, ammonia (NH₃) and volatile organic compounds (VOCs)). Fine particle precursors react in the atmosphere to form PM_{2.5}, which impairs visibility by scattering and absorbing light. Visibility impairment reduces the clarity, color, and visible distance that can be seen. PM_{2.5} can also cause serious adverse health effects and mortality in humans; it also contributes to environmental effects such as acid deposition and eutrophication.

Data from the existing visibility monitoring network, the “Interagency Monitoring of Protected Visual Environments” (IMPROVE), shows that visibility impairment caused by air pollution occurs virtually all of the time at most national parks and wilderness areas. In 1999, the

average visual range¹ in many Class I areas (i.e., national parks and memorial parks, wilderness areas, and international parks meeting certain size criteria) in the western United States was 100-150 kilometers, or about one-half to two-thirds of the visual range that would exist under estimated natural conditions.² In most of the eastern Class I areas of the United States, the average visual range was less than 30 kilometers, or about one-fifth of the visual range that would exist under estimated natural conditions. CAA programs have reduced emissions of some haze-causing pollution, lessening some visibility impairment and resulting in partially improved average visual ranges.³

In Section 169A of the 1977 Amendments to the CAA, Congress created a program for protecting visibility in the nation's national parks and wilderness areas. This section of the CAA establishes as a national goal the prevention of any future, and the remedying of any existing, man-made impairment of visibility in 156 national parks and wilderness areas designated as mandatory Class I Federal areas.⁴ Congress added section 169B to the CAA in 1990 to address regional haze issues, and the EPA promulgated regulations addressing regional haze in 1999. The Regional Haze Rule⁵ revised the existing visibility regulations to add provisions addressing

¹ Visual range is the greatest distance, in kilometers or miles, at which a dark object can be viewed against the sky.

² 64 FR 35715 (July 1, 1999).

³ An interactive "story map" depicting efforts and recent progress by EPA and states to improve visibility at national parks and wilderness areas may be visited at: <http://arcg.is/29tAbS3>.

⁴ Areas designated as mandatory Class I Federal areas consist of National Parks exceeding 6,000 acres, wilderness areas and national memorial parks exceeding 5,000 acres, and all international parks that were in existence on August 7, 1977. 42 U.S.C. 7472(a). In accordance with section 169A of the CAA, EPA, in consultation with the Department of Interior, promulgated a list of 156 areas where visibility is identified as an important value. 44 FR 69122 (November 30, 1979). The extent of a mandatory Class I area includes subsequent changes in boundaries, such as park expansions. 42 U.S.C. 7472(a). Although states and tribes may designate as Class I additional areas which they consider to have visibility as an important value, the requirements of the visibility program set forth in section 169A of the CAA apply only to "mandatory Class I Federal areas." Each mandatory Class I Federal area is the responsibility of a "Federal Land Manager." 42 U.S.C. 7602(i). When we use the term "Class I area" in this action, we mean a "mandatory Class I Federal area."

⁵ Here and elsewhere in this document, the term "Regional Haze Rule," refers to the 1999 final rule (64 FR 35714), as amended in 2005 (70 FR 39156, July 6, 2005), 2006 (71 FR 60631, October 13, 2006), 2012 (77 FR 33656, June 7, 2012), and January 10, 2017 (82 FR 3078).

regional haze impairment and established a comprehensive visibility protection program for Class I areas. The requirements for regional haze, found at 40 CFR 51.308 and 51.309, are included in our visibility protection regulations at 40 CFR 51.300–309. The requirement to submit a regional haze SIP applies to all 50 states, the District of Columbia, and the Virgin Islands. States were required to submit the first implementation plan addressing regional haze visibility impairment no later than December 17, 2007.⁶

Section 169A of the CAA directs states to evaluate the use of retrofit controls at certain larger, often under-controlled, older stationary sources in order to address visibility impacts from these sources. Specifically, section 169A(b)(2)(A) of the CAA requires states to revise their SIPs to contain such measures as may be necessary to make reasonable progress toward the natural visibility goal, including a requirement that certain categories of existing major stationary sources⁷ built between 1962 and 1977 procure, install and operate BART controls. Larger “fossil-fuel fired steam electric plants” are one of these source categories. Under the Regional Haze Rule, states are directed to conduct BART determinations for “BART-eligible” sources that may be anticipated to cause or contribute to any visibility impairment in a Class I area. The evaluation of BART for electric generating units (EGUs) that are located at fossil-fuel fired power plants having a generating capacity in excess of 750 megawatts must follow the “Guidelines for BART Determinations Under the Regional Haze Rule” at appendix Y to 40 CFR Part 51 (hereinafter referred to as the “BART Guidelines”). Rather than requiring source-specific BART controls, states also have the flexibility to adopt an emissions trading program or other

⁶ See 40 CFR 51.308(b). EPA's regional haze regulations require subsequent updates to the regional haze SIPs. 40 CFR 51.308(g)-(i).

⁷ See 42 U.S.C. 7491(g)(7) (listing the set of “major stationary sources” potentially subject-to-BART).

alternative program as long as the alternative provides for greater progress towards improving visibility than BART.

B. Our Previous Actions

Arkansas submitted a SIP revision on September 9, 2008, to address the requirements of the first regional haze implementation period. On August 3, 2010, Arkansas submitted a SIP revision with mostly non-substantive revisions to Arkansas Pollution Control and Ecology Commission (APCEC) Regulation 19, Chapter 15.⁸ On September 27, 2011, the State submitted supplemental information to address the regional haze requirements. We are hereafter referring to these regional haze submittals collectively as the “2008 Arkansas Regional Haze SIP.” On March 12, 2012, we partially approved and partially disapproved the 2008 Arkansas Regional Haze SIP.⁹ On September 27, 2016, we promulgated a FIP (the Arkansas Regional Haze FIP) addressing the disapproved portions of the 2008 Arkansas Regional Haze SIP.¹⁰ Among other things, the FIP established SO₂, NO_x, and PM emission limits under the BART requirements for nine units at six facilities: Arkansas Electric Cooperative Corporation (AECC) Bailey Plant Unit 1; AECC McClellan Plant Unit 1; the American Electric Power/Southwestern Electric Power Company (AEP/SWEPCO) Flint Creek Plant Boiler No. 1; Entergy Arkansas, Inc. (Entergy) Lake Catherine Plant Unit 4; Entergy White Bluff Plant Units 1 and 2; Entergy White Bluff Auxiliary Boiler; and the Domtar Ashdown Mill Power Boilers No. 1 and 2. The FIP also established SO₂ and NO_x emission limits under the reasonable progress requirements for Entergy Independence Units 1 and 2.

⁸ The September 9, 2008 SIP submittal included APCEC Regulation 19, Chapter 15, which is the state regulation that identified the BART-eligible and subject-to-BART sources in Arkansas and established BART emission limits for subject-to-BART sources. The August 3, 2010 SIP revision did not revise Arkansas’ list of BART-eligible and subject-to-BART sources or revise any of the BART requirements for affected sources. Instead, it included mostly non-substantive revisions to the state regulation.

⁹ 77 FR 14604.

¹⁰ 81 FR 66332; *see also* 81 FR 68319 (October 4, 2016) (correction).

Following the issuance of the Arkansas Regional Haze FIP, the State of Arkansas and several industry parties filed petitions for reconsideration and an administrative stay of the final rule.¹¹ On April 14, 2017, we announced our decision to reconsider several elements of the FIP, as follows: appropriate compliance dates for the NO_x emission limits for Flint Creek Boiler No. 1, White Bluff Units 1 and 2, and Independence Units 1 and 2; the low-load NO_x emission limits applicable to White Bluff Units 1 and 2 and Independence Units 1 and 2 during periods of operation at less than 50 percent of the units' maximum heat input rating; the SO₂ emission limits for White Bluff Units 1 and 2; and the compliance dates for the SO₂ emission limits for Independence Units 1 and 2.¹²

EPA also published a document in the Federal Register on April 25, 2017, administratively staying the effectiveness of the NO_x compliance dates in the FIP for the Flint Creek, White Bluff, and Independence units, as well as the compliance dates for the SO₂ emission limits for the White Bluff and Independence units for a period of 90 days.¹³ On July 13, 2017, the EPA published a proposed rule to extend the NO_x compliance dates for Flint Creek Boiler No. 1, White Bluff Units 1 and 2, and Independence Units 1 and 2, by 21 months to January 27, 2020.¹⁴ However, EPA did not take final action on the July 13, 2017 proposed rule because on July 12, 2017, Arkansas submitted a proposed SIP revision with a request for parallel processing, addressing the NO_x BART requirements for Bailey Unit 1, McClellan Unit 1, Flint Creek Boiler No. 1, Lake Catherine Unit 4, White Bluff Units 1 and 2, and White Bluff

¹¹ See the docket associated with this rulemaking for a copy of the petitions for reconsideration and administrative stay submitted by the State of Arkansas; Entergy Arkansas Inc., Entergy Mississippi Inc., and Entergy Power LLC (collectively "Entergy"); AECC; and the Energy and Environmental Alliance of Arkansas (EEAA).

¹² Letter from E. Scott Pruitt, Administrator, EPA, to Nicholas Jacob Bronni and Jamie Leigh Ewing, Arkansas Attorney General's Office (April 14, 2017). A copy of this letter is included in the docket, <https://www.regulations.gov/document?D=EPA-R06-OAR-2015-0189-0240>.

¹³ 82 FR 18994.

¹⁴ 82 FR 32284.

Auxiliary Boiler, as well as the reasonable progress requirements with respect to NO_x (Arkansas Regional Haze NO_x SIP revision or Arkansas Phase I SIP revision). We proposed to approve the State's proposed SIP revision in parallel with the state's SIP process. Our proposed approval of the Arkansas Regional Haze NO_x SIP revision and withdrawal of the corresponding parts of the Arkansas Regional Haze FIP was published in the Federal Register on September 11, 2017.¹⁵ On October 31, 2017, we received ADEQ's final Regional Haze NO_x SIP revision addressing NO_x BART for EGUs and the reasonable progress requirements with respect to NO_x for the first implementation period. On February 12, 2018, we finalized our approval of the Arkansas Regional Haze NO_x SIP revision and our withdrawal of the corresponding parts of the FIP.¹⁶

On August 8, 2018, Arkansas submitted a SIP revision (Arkansas Regional Haze SO₂ and PM SIP revision or Arkansas Regional Haze Phase II SIP revision) addressing all remaining disapproved parts of the 2008 Regional Haze SIP, with the exception of the BART and associated long-term strategy requirements for the Domtar Ashdown Mill Power Boilers No. 1 and 2. The Phase II SIP revision also included a discussion on Arkansas' interstate visibility transport requirements. In a proposed rule published in the Federal Register on November 30, 2018, we proposed approval of a portion of the SIP revision and we also proposed to withdraw the parts of the FIP corresponding to our proposed approvals.¹⁷ We stated in our proposed rule that we intend to propose action on the portion of the SIP revision discussing the interstate visibility transport requirements in a future proposed rulemaking. Since we proposed to withdraw certain portions of the FIP, we also proposed to redesignate the FIP by revising the numbering of certain paragraphs under 40 CFR 52.173 to reflect the removal of language

¹⁵ 82 FR 42627.

¹⁶ 83 FR 5927 and 83 FR 5915 (February 12, 2018).

¹⁷ 83 FR 62204 (November 30, 2018).

applicable to EGUs and the retention of language applicable to the Domtar Ashdown Mill, the only remaining facility subject to the provisions of the FIP.

II. Summary of Final Action

This action finalizes our proposed approval of a portion of the Arkansas Regional Haze SO₂ and PM SIP revision. We are finalizing our approval of ADEQ's revised identification of the 6A Boiler at the Georgia-Pacific Crossett Mill as BART-eligible and the determination based on the additional information and technical analysis presented in the SIP revision that the Georgia-Pacific Crossett Mill 6A and 9A Boilers are not subject to BART. We are finalizing our approval of the state's BART determinations as follows: SO₂ and PM BART for the AECC Bailey Plant Unit 1; SO₂ and PM BART for the AECC McClellan Plant Unit 1; SO₂ BART for the AEP/SWEPCO Flint Creek Plant Boiler No. 1; SO₂ BART for Entergy White Bluff Units 1 and 2; SO₂, NO_x, and PM BART for the Entergy White Bluff Auxiliary Boiler; and the prohibition on burning of fuel oil at Entergy Lake Catherine Unit 4 until SO₂ and PM BART determinations for the fuel oil firing scenario are approved into the SIP by EPA. These BART requirements have been made enforceable by the state through Administrative Orders and submitted as part of the SIP revision. We are finalizing our approval of these BART Administrative Orders as part of the SIP.

We are finalizing our withdrawal of our prior approval of Arkansas' reliance on participation in the Cross-State Air Pollution Rule (CSAPR) for ozone season NO_x to satisfy the NO_x BART requirement for the White Bluff Auxiliary Boiler. The Arkansas Regional Haze NO_x SIP revision erroneously stated that the Auxiliary Boiler participates in CSAPR for ozone season NO_x and that the state was electing to rely on participation in that trading program to satisfy the Auxiliary Boiler's NO_x BART requirements, and we erroneously approved this

determination in a final action published in the Federal Register on February 12, 2018.¹⁸ We are finalizing our withdrawal of our approval of that determination for the Auxiliary Boiler and are replacing it with our final approval of a source-specific NO_x BART emission limit contained in the Arkansas Regional Haze SO₂ and PM SIP Revision before us. The NO_x BART requirement has been made enforceable by the state through an Administrative Order and submitted as part of the SIP revision. We are finalizing our approval of the Administrative Order that contains the NO_x BART requirement as part of the SIP.

We are also finalizing our approval of Arkansas' reasonable progress determinations for Independence Units 1 and 2 and determination that no additional controls are necessary for SO₂ or PM under the reasonable progress requirements for the first implementation period and are also agreeing with the state's calculation of revised RPGs for its Class I areas. We are finalizing our determination that, based on the state's currently approved SIP and the analyses and determinations we are approving in this final action, the state's reasonable progress obligations for the first implementation period have been satisfied. At this time, the majority of the BART requirements for the Domtar Ashdown Mill are satisfied by a FIP.¹⁹ The SIP revision explains that, based upon the BART determinations and analysis in that FIP, nothing further is currently needed for reasonable progress at the Domtar Ashdown Mill. EPA agrees with this determination. We do note that ADEQ recently submitted a SIP revision to address the BART requirements for Domtar Power Boilers No. 1 and No. 2 that are currently satisfied by the FIP, and we intend to take action on that SIP revision addressing Domtar in a future rulemaking. At that time, we will evaluate any conclusions ADEQ draws in that SIP submittal about the

¹⁸ 83 FR 5927

¹⁹ We note that the only exception to this is the PM determination for Domtar Ashdown Mill Power Boiler No. 1 contained in the 2008 Arkansas Regional Haze SIP. That BART determination was approved in our 2012 rulemaking. 77 FR 14604, March 12, 2012.

adequacy of such SIP-based measures for reasonable progress. We will also evaluate any changes in the measures for the Domtar Ashdown Mill in that SIP revision relative to those currently in the FIP to determine whether the calculation of the reasonable progress goals for the first implementation period continues to be sufficient.

We are finalizing our approval of the components of the long-term strategy addressed by the Arkansas Regional Haze Phase II SIP revision and are finding that Arkansas' long-term strategy for reasonable progress with respect to all sources other than Domtar is approved. We are finalizing our approval of the 0.60 lb/MMBtu SO₂ emission limitations for Independence Units 1 and 2, and these measures are now integrated into the State's long-term strategy. The long-term strategy is the compilation of all control measures a state relies on to make reasonable progress towards the goal of natural visibility conditions, including emission limitations corresponding to BART determinations. Because the Arkansas Regional Haze Phase II SIP revision does not address the BART requirements for Domtar, those components of the long-term strategy will remain satisfied by the FIP unless and until EPA has received and approved a SIP revision containing the required analyses and determinations for this facility.²⁰

We are also finalizing our determination that Arkansas has satisfied the requirement under 40 CFR 51.308(i) to consult and coordinate with the federal land managers (FLMs).²¹ Additionally, we are finalizing our determination that Arkansas has satisfied the requirement under 40 CFR 51.308(d)(3)(i) to coordinate and consult with Missouri, which has Class I areas affected by Arkansas sources.²²

²⁰ As noted above, ADEQ recently submitted a SIP revision to address the BART requirements for Domtar Power Boilers No. 1 and No. 2 that are currently satisfied by the FIP. We intend to evaluate that SIP revision and to take action on it in a future rulemaking.

²¹ 83 FR 62234.

²² 83 FR 62234.

As we discussed in our proposal, the SIP revision also includes a discussion on interstate visibility transport. We are aware that Arkansas is working on a SIP revision to address the interstate visibility transport requirements for several national ambient air quality standards (NAAQS), and we therefore deferred evaluating and proposing action on the interstate visibility transport portion of the Arkansas Regional Haze Phase II SIP revision until a future proposed rulemaking.

We are finalizing our approval of a portion of the Arkansas Regional Haze Phase II SIP revision as we have found it to meet the applicable provisions of the Act and EPA regulations and is consistent with EPA guidance. We received comments from several commenters on our proposed approval. Our responses to the substantive comments we received are summarized in Section III. We have fully considered all significant comments on our proposed action on the SIP revision submittal and have concluded that no changes to our final determinations are warranted.

We are approving a portion of the Arkansas Regional Haze Phase II SIP revision submitted by ADEQ on August 8, 2018, as we have determined that it meets the regional haze SIP requirements, including the BART requirements in §51.308(e); the reasonable progress requirements in §51.308(d); and the long-term strategy requirements in §51.308(d)(3). In conjunction with this final approval, we are finalizing in a separate rulemaking, published elsewhere in this issue of the Federal Register, our withdrawal of FIP provisions corresponding to the portions of the SIP revision we are taking final action to approve in this rulemaking.

III. Response to Comments

The public comments received on our proposed rule are included in the publicly posted docket associated with this action at *www.regulations.gov*.²³ We reviewed all public comments that we received on the proposed action. Below, we provide a summary of substantive comments and our responses. Summaries of all comments and our full responses thereto are contained in a separate document titled the Arkansas Regional Haze Phase II SIP Revision Response to Comments, which can be found in the docket associated with this final rulemaking.

A. White Bluff SO₂ BART Requirements

Comment: EPA proposed to approve ADEQ's determination that low sulfur coal with an emission rate of 0.60 lb/MMBtu on a 30-day rolling average is SO₂ BART for White Bluff Units 1 and 2. However, the cost-effectiveness figures for dry scrubbers at White Bluff Units 1 and 2 are well within the range of what has been found to be cost effective in other regional haze actions. EPA should reverse its position, disapprove ADEQ's White Bluff SO₂ BART determination, and finalize its previous rule that SO₂ emission limits corresponding to dry scrubbers constitute SO₂ BART at White Bluff.

Response: We remind the commenter that each BART determination is dependent on the specific situation of the source and involves the consideration of a number of factors that usually vary on a case by case basis. This includes consideration of the five statutory factors required under the Regional Haze Rule at § 51.308(e)(1)(ii)(A) and CAA section 169A(g)(2). BART determinations are source specific—what is a reasonable determination for one source may not be appropriate given the facts and circumstances applicable to another source. The states also have wide discretion in the evaluation of the five statutory factors and in formulating SIPs,

²³ Docket No. EPA-R06-OAR-2015-0189.

so long as they satisfy the applicable requirements and provide a reasoned and rational basis for their decisions.

While it is true that some SO₂ BART controls required under other regional haze actions have similar cost-effectiveness figures as those for dry scrubbers for White Bluff, we find that ADEQ satisfied the requirements of the CAA and the Regional Haze Rule by fully considering the five statutory factors in the SO₂ BART analysis for White Bluff Units 1 and 2. Taking into account the remaining useful life of White Bluff Units 1 and 2 (based on Entergy's enforceable Administrative Order to cease coal combustion by December 31, 2028), and the resulting cost-effectiveness of controls, as well as the anticipated visibility improvement of the SO₂ control options and the other BART factors, ADEQ determined that SO₂ BART for White Bluff Units 1 and 2 is an emission limit of 0.60 lb/MMBtu based on the use of low sulfur coal beginning no later than three years from the effective date of the Administrative Order (August 7, 2021) through the end of 2028.

As we explained in our proposal, ADEQ's cost analysis was based on a dry scrubber system assuming an inlet coal sulfur content of 1.2 lb/MMBtu, which is based on Entergy's current coal contract sulfur limit.²⁴ However, the White Bluff units have historically burned coal with a lower sulfur content. Therefore, we relied on our FIP's cost analysis for dry scrubbers for White Bluff, which was based on a scrubber system designed to burn coal having a sulfur content consistent with what the units have historically burned, and we adjusted for a 7-year as opposed to a 30-year capital cost recovery period to reflect that the units will cease coal combustion by the end of 2028.²⁵ Based on our revised cost estimates, dry scrubbers are estimated to cost approximately \$4,376/ton for Unit 1 and \$4,129/ton for Unit 2. The visibility

²⁴ 83 FR 62222.

²⁵ 83 FR 62222.

benefit of dry scrubbers at White Bluff Units 1 and 2 is anticipated to be 0.603 dv at Caney Creek and 0.642 dv at Upper Buffalo for Unit 1 and 0.574 dv at Caney Creek and 0.632 dv at Upper Buffalo for Unit 2; Caney Creek and Upper Buffalo are the two Class I areas where White Bluff Units 1 and 2 have the greatest modeled baseline visibility impacts.²⁶

In this instance, we believe Arkansas is within its discretion to evaluate the BART factors as it has done, and we find that the state has presented a reasoned basis for its BART determination and has met all CAA and Regional Haze Rule requirements in making the BART determination for White Bluff. Considering all the above, we are finalizing our approval of ADEQ's determination that SO₂ BART for White Bluff Units 1 and 2 is an emission limit of 0.60 lb/MMBtu based on the use of low sulfur coal, with an enforceable Administrative Order requiring Entergy to cease coal combustion at White Bluff Units 1 and 2 by December 31, 2028.

Comment: EPA's proposed approval of ADEQ's determination that low sulfur coal with an emission rate of 0.60 lb/MMBtu on a 30-day rolling average is SO₂ BART for White Bluff Units 1 and 2 and rejection of dry scrubbers is arbitrary when compared to the Flint Creek SO₂ BART determination. The SO₂ BART determination for Flint Creek Boiler No. 1 was based on very similar cost-effectiveness figures for dry scrubbers, but in that case, EPA required a scrubber as BART. EPA should reverse its position and disapprove ADEQ's SO₂ BART determination for White Bluff Units 1 and 2.

Response: We disagree with the commenter that our proposed approval of ADEQ's SO₂ BART determination for White Bluff Units 1 and 2 is arbitrary when compared to our proposed approval of the Flint Creek SO₂ BART determination. In particular, the commenter contends that it is arbitrary and capricious for EPA to find that White Bluff SO₂ BART is an emission limit

²⁶ See 83 FR 62221-62222.

based on low-sulfur coal, while also finding that SO₂ BART for Flint Creek is an emission limits based on a dry scrubber. EPA did not make these findings in the context of a FIP, but rather proposed to approve ADEQ's determinations based on our finding that the State reasonably determined that SO₂ BART for White Bluff Units 1 and 2 is an emission limit of 0.60 lb/MMBtu based on the use of low sulfur coal and that SO₂ BART for Flint Creek Boiler No. 1 is an emission limit of 0.06 lb/MMBtu based on the use of a dry scrubber. The states have wide discretion in the evaluation of the five statutory factors and in formulating SIPs, so long as they satisfy the applicable requirements and provide a reasoned and rational basis for their decisions. Furthermore, BART determinations are source specific—what is a reasonable determination for one source may not be appropriate given the facts and circumstances applicable to another source. In this instance, we believe Arkansas is within its discretion to evaluate the BART factors as it has done, and we find that the state has presented a reasoned basis for its BART determinations and has met all CAA and Regional Haze Rule requirements in making the SO₂ BART determinations for White Bluff and Flint Creek.

We note that the cost-effectiveness figures for dry scrubbers for White Bluff are in fact higher than that for a Novel Integrated Deacidification (NID) system, a type of dry scrubbing technology, for Flint Creek. In our proposed rule, we estimated the cost effectiveness of dry scrubbers for White Bluff Units 1 and 2 to be \$4,376/ton for Unit 1 and \$4,129/ton for Unit 2. The visibility benefit of dry scrubbers at White Bluff is anticipated to be 0.603 dv at Caney Creek and 0.642 dv at Upper Buffalo for Unit 1 and 0.574 dv at Caney Creek and 0.632 dv at Upper Buffalo for Unit 2; Caney Creek and Upper Buffalo are the two Class I areas where White Bluff Units 1 and 2 have the greatest modeled baseline visibility impacts.²⁷ The cost-

²⁷ See 83 FR 62221-62222.

effectiveness of a NID system for Flint Creek is \$3,845/ton. We consider the cost of a dry scrubber at Flint Creek to be generally cost effective when also taking into account the level of visibility benefit of the control and the other BART factors. The visibility benefit of a NID system at Flint Creek Boiler No. 1 is anticipated to be 0.615 dv at Caney Creek and 0.464 dv at Upper Buffalo, the two Class I areas where Flint Creek Boiler No. 1 has the greatest modeled baseline visibility impacts.²⁸ The anticipated level of visibility benefit at Caney Creek and Upper Buffalo due to dry scrubbers at White Bluff Units 1 and 2 is comparable to the anticipated visibility benefit due to NID at Flint Creek Boiler No. 1, but the cost-effectiveness figures for dry scrubbers at White Bluff are higher than that for Flint Creek, and start to go into the higher end of what has been found to be cost effective in other regional haze actions when also taking into account the level of visibility benefit of the controls and other factors.²⁹ Additionally, the NID system was already installed and operating at Flint Creek Boiler No. 1 at the time that ADEQ finalized and submitted the Regional Haze SO₂ and PM SIP revision. Thus, we believe it would have been unreasonable for ADEQ to find that SO₂ BART for Flint Creek Boiler No. 1 is not a NID system when those controls are already installed and operational at the facility. In contrast, there is no planned installation of this control equipment at White Bluff Units 1 and 2, which have a shortened remaining useful life based on an enforceable Administrative Order that is part of this SIP revision. Furthermore, since Flint Creek Boiler No. 1 is currently assumed to continue operating for at least another 30 years while White Bluff Units 1 and 2 are required to cease coal combustion by the end of December 2028 based on the enforceable Administrative Order that is part of this SIP revision, we find that it is reasonable for ADEQ to have determined that SO₂ BART for Flint Creek Boiler No. 1 is an emission limit based on the use of dry scrubbers while

²⁸ See 83 FR 62218.

²⁹ 83 FR 62222.

SO₂ BART for White Bluff Units 1 and 2 is an emission limit based on the use of low sulfur coal. We are taking final action to approve the state's SO₂ BART determinations for these units.

Comment: Although EPA's estimated dry scrubber costs demonstrate that this control technology is not cost-effective for White Bluff Units 1 and 2, the costs of dry scrubbers are actually underestimated by EPA. EPA's cost assessment assumes that White Bluff will combust coal with a sulfur content of 0.68 lb/MMBtu, which was the maximum monthly emission rate from 2009-2013, and its calculation of the equipment costs reflects scrubbers sized to accommodate this sulfur content. However, EPA is incorrect to assume that the sulfur content of coal that will be combusted at the plant in the future will not exceed the maximum monthly average sulfur content from 2009-2013. EPA ignores the fact that the plant can receive coal with a sulfur content up to 1.2 lb/MMBtu pursuant to its coal contracts, and that White Bluff in fact had a maximum 3-hour average emission rate of 1.1 lb/MMBtu from 2014-2016. A dry scrubber must be designed to handle the highest sulfur content that may be combusted at the unit, as an inappropriately designed scrubber would be incapable of addressing SO₂ emissions exceeding the design limit. If the scrubber system at White Bluff were designed to treat flue gas with a SO₂ emission rate of 0.68 lb/MMBtu, the system would be inadequately sized to add sufficient reagent when sulfur levels increase beyond that level, which would result in emissions above the proposed emission rate for that period of operation. The cost analysis in the SIP revision appropriately reflected the installation of scrubbers designed to handle the maximum coal sulfur content at the plant. If EPA retains its cost estimate based on the installation of scrubbers that can accommodate only lower sulfur coal, then EPA must account for the fact that Entergy would need to ensure that only lower sulfur coal is purchased in the future. The resulting increase in fuel costs must be accounted for in the scrubber cost analysis. Failure to do so renders EPA's

estimates inaccurate and does not allow for a proper evaluation of the costs of dry scrubbers at White Bluff.

Response: We disagree with the commenter's approach for estimating the cost-effectiveness of dry scrubbers for White Bluff Units 1 and 2. The commenter argues that a mismatch between the cost of the scrubber systems and the SO₂ emission baseline against which the cost-effectiveness will be measured can be legitimately introduced. Specifically, the commenter argues that the units could in the future burn coal containing a higher sulfur content than what has been burned in the past, emphasizing that the plant can receive coal with a sulfur content up to 1.2 lb/MMBtu pursuant to its coal contracts. Therefore, the commenter insists on costing the dry scrubbers for White Bluff Units 1 and 2 assuming the units will burn coal with a sulfur content of 1.2 lb/MMBtu, while at the same time basing the calculation of the SO₂ tons reduced in the cost-effectiveness calculations on a lower emissions level of 0.68 lb/MMBtu based on the same 2009-2013 SO₂ baseline period that the commenter objects to for purposes of costing the scrubbers.³⁰ This cherry-picking of emission rates has ramifications for the scrubber cost effectiveness calculation, in which the annualized cost of the controls are compared to the SO₂ tons reduced from the SO₂ baseline. A scrubber capable of treating a higher sulfur coal is more expensive. While Entergy is free to design a scrubber capable of burning a coal with a higher sulfur content (assuming all regulatory requirements are otherwise met), this expense must be balanced against the greater SO₂ removal capabilities of such a scrubber. Otherwise, the cost effectiveness calculation is unreasonably skewed. In other words, if the Entergy cost analysis on which the SIP revision relies had also based the calculation of the SO₂ tons reduced on an assumed baseline emission rate of 1.2 lb/MMBtu, this would have reflected greater tons of

³⁰ See the Arkansas Regional Haze SO₂ and PM SIP Revision, p. 4-4.

SO₂ removed, which would in turn result in cost estimates more cost-effective than reflected in Entergy's estimates.

Instead of relying on the SIP's cost estimates, which are based on Entergy's estimates for a dry scrubber designed to treat coal with a sulfur content of 1.2 lb/MMBtu, we presented revised cost estimates for dry scrubbers for White Bluff in our proposal. After considering our lower revised cost numbers, we still agree with ADEQ's SO₂ BART determination for White Bluff Units 1 and 2 in the SIP revision. Our revised cost estimates rely on our FIP's cost analysis, which was based on a scrubber system designed to burn coal having a sulfur content of 0.68 lb/MMBtu, which is the units' maximum monthly emission rate from 2009-2013.³¹ Assuming a coal sulfur content that reflects the sulfur levels of the coal historically burned at the units is the appropriate basis for our cost estimate, consistent with the BART Guidelines:³²

The baseline emissions rate should represent a realistic depiction of anticipated annual emissions for the source. In general, for the existing sources subject to BART, you will estimate the anticipated annual emissions based upon actual emissions from a baseline period. When you project that future operating parameters (e.g., limited hours of operation or capacity utilization, type of fuel, raw materials or product mix or type) will differ from past practice, and if this projection has a deciding effect in the BART determination, then you must make these parameters or assumptions into enforceable limitations. In the absence of enforceable limitations, you calculate baseline emissions based upon continuation of past practice.

³¹ 83 FR 62222.

³² 70 FR 39167.

Based on the BART Guidelines, the presumption is that the baseline emissions should be based on historical emissions. If future operations are expected to differ from past practices, and this impacts the BART analysis, an enforceable mechanism must be in place. The example in the above reference to the BART Guidelines anticipates that future operations will cause the baseline to be lower, resulting in a correspondingly lower denominator in the \$/ton cost effectiveness calculation, thus resulting in the cost effectiveness seeming less attractive (higher) and triggering the need for an enforceable mechanism to ensure the integrity of the cost-effectiveness calculation into the future. The same principle applies to Entergy's situation, in that using a higher scrubber cost for scrubbing a higher sulfur coal, in conjunction with using an unrepresentative (lower) baseline, both act to make the \$/ton cost effectiveness of the scrubber seem less attractive (higher). In this instance, we would not require an enforceable mechanism to ensure Entergy burns a higher sulfur coal, but the need to ensure the future integrity of the cost-effectiveness calculation nevertheless remains.

There are two obvious ways to ensure the cost effectiveness calculation accurately reflects the costs and emission reductions of scrubbers for White Bluff: either (1) the higher cost of a scrubber designed to handle a higher sulfur coal must be balanced against its greater SO₂ reduction potential, or (2) the scrubber system's capability and cost must match the facility's historical emissions. We took the latter approach in estimating the cost of dry scrubbers in our proposal. However, the commenter disagrees with either approach, arguing instead that the higher scrubber cost for scrubbing a higher sulfur coal (which it claims could be representative of future emission rates) should be paired with a historical (lower) baseline.

We also note that the commenter does not appear to argue that basing the cost analysis on a scrubber system designed to burn coal having a sulfur content of 0.68 lb/MMBtu is inconsistent with its historical maximum monthly emission rate, but only suggests that in the future the White Bluff units may be burning coal containing a higher sulfur content. The commenter also points to the units' maximum 3-hour average emission rate of 1.1 lb/MMBtu from 2014-2016 in arguing that the cost analysis must reflect a dry scrubber that is designed to handle the highest sulfur content that may be combusted at the unit. However, we note that this is a maximum 3-hour average, while our cost estimates were based on a scrubber system designed to burn coal having a sulfur content of 0.68 lb/MMBtu, which is the units' maximum monthly emission rate from 2009-2013. This is significant because variations in emissions due to changes in coal quality, reagent quality, or scrubber performance are normally accommodated in permitting by specifying a sufficiently long averaging time, such as a 30-day averaging period, which is specifically designed to average out short term fluctuations. In general, averaging smooths out fluctuations in data.³³ Furthermore, the emission limit evaluated by ADEQ and Entergy in the BART analysis for scrubbers, if selected as BART, would have been on a rolling 30 boiler-operating-day averaging period; therefore, the cost analysis should reflect the design of a scrubber that would meet the same averaging period. In this context, the maximum 3-hour emission rate does not hold much significance. Therefore, we do not agree with the commenter's argument that since White Bluff had a maximum 3-hour average emission rate of 1.1 lb/MMBtu, it is necessary to install a scrubber designed to treat flue gas with a SO₂ emission rate of 1.2 lb/MMBtu.

³³ Thad Godish, Air Quality, Lewis Publishers, 2nd Ed., 1991, p. 216, Figure 7.1; Richard W. Boubel, Donald L. Fox, Bruce Turner, and Arthur C. Stern, Fundamentals of Air Pollution, Academic Press, 3rd Ed., 1994, pp. 41 - 43.

Considering the above, we disagree with the commenter that we underestimated the cost of dry scrubbers for White Bluff by basing our cost assessment on the assumption that White Bluff will combust coal with a sulfur content of 0.68 lb/MMBtu. Nevertheless, our disagreement with the commenter on the above issues does not ultimately impact our final action given that even after considering our lower cost estimates, we find that ADEQ reasonably exercised its discretion in concluding that the costs of dry scrubbers are not warranted after also taking into account the level of anticipated visibility benefit at the affected Class I areas due to these controls and the other BART factors, including consideration that an Administrative Order that is part of the SIP revision requires the White Bluff units to cease coal combustion by December 31, 2028. We are finalizing our proposed approval of ADEQ's determination that SO₂ BART for White Bluff Units 1 and 2 is an emission limit of 0.60 lb/MMBtu based on the use of low sulfur coal.

Comment: The commenter supports EPA's proposed approval of rolling 30-day average BART SO₂ emission limits of 0.60 lb/MMBtu for White Bluff Units 1 and 2 based on combustion of low sulfur coal. While EPA underestimates the costs of dry scrubbers at White Bluff, even its undervalued costs support a determination that add-on SO₂ control technology is not BART for White Bluff. EPA's cost estimates fail to include certain cost items that EPA claims are disallowed pursuant to the Control Cost Manual. These "disallowed" costs should be included in the cost analyses, as they reflect the actual costs of planning, installing, and operating controls. Accounting for the disallowed costs makes the control technologies even less cost-effective. However, even EPA's flawed cost estimates demonstrate that dry sorbent injection (DSI), enhanced DSI and dry scrubbers are not cost-effective for White Bluff.

Response: We appreciate the commenter’s support of our proposed approval of ADEQ’s determination that SO₂ BART for White Bluff Units 1 and 2 are emission limits of 0.60 lb/MMBtu based on combustion of low sulfur coal. However, we disagree with the commenter that we have underestimated the costs of dry scrubbers at White Bluff. In particular, the commenter states that EPA’s cost estimates fail to include certain cost items that EPA claims are disallowed pursuant to the Control Cost Manual and that Entergy continues to believe that these “disallowed” costs should be included in the cost analyses. The commenter claims these disallowed costs reflect the actual costs of planning, installing, and operating controls. We disagree with the commenter that the disallowed line items should be included in the cost analyses. As we discussed in our proposal, ADEQ’s evaluation of controls in the SIP revision is based on Entergy’s set of cost numbers that excludes the line items disallowed under the EPA Control Cost Manual,³⁴ which the BART Guidelines specify should be the basis of cost estimates, where possible.³⁵ We stated in our proposal that we agree that Allowance for Funds Used During Construction (AFUDC) and certain other cost items are not allowed to be considered in estimating the cost-effectiveness of controls for regional haze purposes under the EPA Control Cost Manual.³⁶ We explained in our proposal that we, therefore, agree with ADEQ’s decision to base its evaluation of controls on Entergy’s set of cost numbers that did not include the disallowed line items instead of relying on the set of cost numbers that did include the disallowed line items.³⁷ However, as we discussed in a previous response, we ultimately presented revised cost estimates for dry scrubbers for White Bluff in our proposal instead of relying on ADEQ’s cost estimates from the SIP revision because ADEQ’s cost estimates were

³⁴ 83 FR 62220.

³⁵ 40 CFR part 51 appendix Y, IV.D.4.a.

³⁶ 83 FR 62222.

³⁷ 83 FR 62222.

based on Entergy's estimates for a dry scrubber that was inappropriately designed to treat coal with a sulfur content of 1.2 lb/MMBtu.

As we have noted in a number of other regional haze actions, certain line items such as AFUDC, owner's costs, and escalation during construction are not valid costs under our Control Cost Manual methodology. We incorporate our responses to similar comments we have received in those actions here.³⁸ The exclusion of these disallowed line items in estimating the cost-effectiveness of controls for BART purposes is consistent with the "overnight" methodology outlined in our Control Cost Manual. We note that the Ninth and Tenth Circuits have upheld our use of the overnight cost methodology and our long-standing position in the regional haze program that certain line items such as AFUDC are not allowed under the Control Cost Manual approach of cost estimating.³⁹

Despite our disagreement with the commenter on the above issues, we note that our position on these issues does not ultimately impact our final action given that even after considering the set of cost-effectiveness figures that exclude the disallowed line items, we find that ADEQ reasonably determined that the costs of DSI, enhanced DSI, and dry scrubbers are not warranted after also taking into account the level of anticipated visibility benefit at the affected Class I areas due to these controls and the other BART factors, including consideration that an Administrative Order that is part of the SIP revision requires the White Bluff units to

³⁸ See for instance, our "Response to Technical Comments for Sections E through H of the Federal Register Notice for the Oklahoma Regional Haze and Visibility Transport Federal Implementation Plan," Docket No. EPA-R06-OAR-2010-0190, 12/13/2011. See pages 7-10, 12-21, 33-34, 46-47, 63-64, 68, 70-71, 80, 85-86, and 88. This document can also be found in the docket for our final action on the Arkansas Regional Haze Phase II SIP Revision (Docket No. EPA-R06-OAR-2015-0189).

³⁹ See *Ariz. ex rel. Darwin v. EPA*, 815 F.3d 519 (9th Cir. 2016), page 39: "This argument restates Petitioners' objections to EPA's reliance on the overnight costing methodology when it partially disapproved Arizona's SIP. See *supra* note 14. EPA's use of such a methodology in its own FIP's cost analysis is, without doubt, reasonable." See also *Oklahoma v. EPA*, 723 F.3d 1201 (July 19, 2013), *cert. denied* (U.S. May 27, 2014) where EPA disapproved certain BART determinations that did not rely on the overnight cost methodology as well as relied on certain cost items such as AFUDC which are not allowed per the EPA Control Cost Manual.

cease coal combustion by December 31, 2028. We are therefore finalizing our proposed approval of ADEQ's determination that SO₂ BART for White Bluff Units 1 and 2 is an emission limit of 0.60 lb/MMBtu based on the use of low sulfur coal.

Comment: ADEQ's SO₂ BART determination for White Bluff Units 1 and 2 is based on a voluntary decision made by Entergy to cease coal combustion at the units by December 31, 2028. White Bluff Units 1 and 2 are co-owned by Entergy, AECC, and several Arkansas municipalities. Entergy and AECC are public utilities subject to the jurisdiction of the Arkansas Public Service Commission (APSC). Since the Administrative Order requires Entergy to comply with applicable law, EPA should acknowledge that Entergy is required to seek APSC approval for the cessation of coal combustion at White Bluff prior to the end of its effective useful life.

Response: The relevant consideration for BART determinations is whether any commitment to change future operations, when such changes impact the outcome of the BART analysis, is enforceable for purposes of the SIP.⁴⁰ Under a BART analysis, the remaining useful life of a scrubber is assumed to be 30 years unless a facility has an enforceable agreement in place to shut down or cease coal combustion earlier in order for EPA or the state to rely on it in calculating the remaining useful life as part of the BART determination analysis. Here, Entergy entered into an Administrative Order with ADEQ, which is an enforceable document that ADEQ has incorporated into its SIP revision, to cease coal combustion at Units 1 and 2 at White Bluff by December 31, 2028. It was therefore appropriate for ADEQ to rely on this cease to combust coal date for White Bluff Units 1 and 2 in the calculation of the units' remaining useful life, which is used to determine the cost effectiveness of controls in the BART analysis.

⁴⁰ See 40 CFR part 51, appendix Y, IV.D.4.d, k.

To the extent the commenter is contending that the Administrative Order itself requires Entergy to obtain APSC approval in order to be able to make the changes in operations necessary to comply with the requirements of that Administrative Order (AO), we note that Provision No. 12 provides that “Nothing contained in this AO shall relieve Entergy Arkansas of any obligations imposed by any other applicable local, state, or federal laws, nor, except as specifically provided herein, shall this AO be deemed in any way to relieve Entergy Arkansas of responsibilities contained in the permit.”⁴¹ EPA cannot comment on what other local or state laws are applicable including whether Entergy and some of the White Bluff co-owners are public utilities subject to the jurisdiction of the APSC. With regard to the commenter’s statement that Entergy will be required to obtain approval from the APSC with respect to the provisions in the Administrative Order, we note that such matter falls under the jurisdiction of Arkansas state law and is outside of the scope of our proposal.

To the extent that the commenter is suggesting that EPA should acknowledge that approval will be required from the APSC because the lack of such approval would prevent Entergy from complying with the voluntary cessation of coal combustion, we note that Entergy has entered into an enforceable Administrative Order, which requires the cessation of coal combustion at White Bluff Units 1 and 2 by December 31, 2028. In this final action, we are approving the Administrative Order as part of the SIP, and it is now therefore federally enforceable as a source-specific requirement. If Entergy does not comply with the terms of the Administrative Order, such as not ceasing coal combustion by December 31, 2028, Entergy will be in violation of the SIP, which is a federal requirement. Under Section 113 of the CAA (42

⁴¹ The Administrative Order for Entergy can be found in the Arkansas Regional Haze SO₂ and PM BART SIP Revision. See Paragraph 12 of the Order and Agreement Section.
<https://www.adeq.state.ar.us/air/planning/sip/pdfs/regional-haze/entergy-ao-executed-8-7-2018.pdf>.

U.S.C. 7413), which addresses, among other things, federal enforcement of SIPs, EPA has the authority to enforce the terms of the Entergy Administrative Order, such as ceasing coal combustion by December 31, 2028, that are being incorporated into Arkansas' SIP here. In addition, under Section 304 of the CAA (42 USC 7604), citizens and/or citizens groups have the authority to enforce emission limitations in orders, such as the provisions within the Entergy Administrative Order, or require EPA to do so, through the notice of the CAA citizens' suit process.

Comment: Entergy's five factor analysis for White Bluff does not take into account any electric reliability or energy supply impacts arising from Entergy's voluntary decision to prematurely close White Bluff, which ultimately will require the replacement of White Bluff's firm electric generating capacity, not only for Entergy but also for the other White Bluff co-owners. This factor should have been considered in the five-factor analysis for White Bluff.

Response: The commenter is correct that Entergy's BART analysis for White Bluff, which is part of the SIP revision, and on which ADEQ based its BART determination for White Bluff, did not identify any electric reliability or energy supply impacts arising from Entergy's voluntary decision to cease coal combustion at White Bluff. We note that the energy and nonair quality environmental impacts of compliance is one of the factors that the CAA and the Regional Haze rule require to be considered in the BART analysis.⁴² However, neither Entergy in its BART analysis nor ADEQ in the SIP revision identify any adverse energy and nonair quality environmental impacts associated with Entergy's enforceable measure to cease coal combustion at White Bluff prior to the end of the effective useful life of the facility, or with any other BART control option evaluated. EPA is also not aware of any such adverse impacts, and we therefore

⁴² See §51.308(e)(1)(ii)(A) and CAA section 169A(g)(2).

defer to ADEQ's determination that there are no significant energy impacts to consider in the five-factor BART analysis for White Bluff.

B. Reasonable Progress

Comment: EPA's proposed approval of ADEQ's reasonable progress analysis and conclusions for the Independence facility are arbitrary, capricious, and contrary to law. Dry scrubbers at Independence are highly cost-effective when considering other regional haze actions in Arkansas and elsewhere, and thus EPA's and ADEQ's consideration of cost is arbitrary and unlawful. EPA should revise its proposed rule to find that dry scrubbers at Independence are cost-effective and should be required under reasonable progress.

Response: We disagree with the commenter that our proposed approval of ADEQ's reasonable progress analysis and conclusions for the Independence facility for the first implementation period are arbitrary, capricious, or contrary to law. We do not contest that the cost effectiveness of dry scrubbers at Independence on a dollar per ton reduced (\$/ton) basis is within the range of what other states and EPA have found reasonable for reasonable progress controls. However, in this action we evaluated ADEQ's reasonable progress analysis and conclusions and determined that it was not unreasonable for the State to conclude that dry scrubbers for Independence are not necessary to make reasonable progress.

We noted in our proposal that Arkansas considered the capital costs of dry scrubbers and wet scrubbers to be high even though the costs in terms of \$/ton of SO₂ emissions reduced for both dry and wet scrubbers at the Independence facility (assuming a 30-year remaining useful life) are within a range that has been found to be cost-effective in other regional haze actions.⁴³

⁴³ See 83 FR 62230.

However, Arkansas' reasonable progress determination was not just based on the consideration of the cost-effectiveness of controls. Arkansas' reasonable progress determination with respect to the Independence facility was appropriately based on its consideration and weighing of the costs of compliance along with the other reasonable progress factors, as well as visibility, which the state deemed to be a relevant factor for consideration in its analysis. Arkansas discussed its concerns regarding the cost of scrubber controls,⁴⁴ noted that the evaluation of the \$/dv metric demonstrated a greater difference in cost between dry FGD and low sulfur coal compared to the \$/ton metric, and ultimately concluded that all the controls it evaluated would cost millions of dollars for what it considers to be little visibility benefit. We explained in our proposal that we believe that Arkansas' weighing of the four statutory factors and other factors it deemed relevant in its reasonable progress analysis for the Independence facility was reasonable and within the state's discretion.⁴⁵ Furthermore, we note that our 2007 Reasonable Progress Guidance allows for the deferral of emission reductions to later planning periods, which ADEQ cites in its SIP,⁴⁶ in deciding what amount of emissions reduction is appropriate in setting the RPGs considering that the long-term goal of no manmade impairment encompasses several planning periods.⁴⁷ We are finding here that considering all the above, including the state's concerns about the cost of

⁴⁴ As discussed in our proposal, in light of Entergy's anticipated cessation of coal combustion at the Independence facility, although it is not state- or federally-enforceable, Arkansas considered it important to take into account the capital cost of controls along with the cost-effectiveness in terms of dollars per ton of emissions reduced. In its consideration of the cost of compliance, Arkansas also took into account that these costs would be passed on to Arkansas ratepayers. See 83 FR 62230.

⁴⁵ 83 FR 62233.

⁴⁶ See pages 28-53 of Arkansas Final Regional Haze Phase II SIP.
https://www3.epa.gov/ttn/naaqs/aqmguid/collection/cp2/20070601_wehrum_reasonable_progress_goals_reghaze.pdf

⁴⁷ See Section 1.2 of EPA's "Guidance for Setting Reasonable Progress Goals under the Regional Haze Program" (June 1, 2007).
https://www3.epa.gov/ttn/naaqs/aqmguid/collection/cp2/20070601_wehrum_reasonable_progress_goals_reghaze.pdf

controls⁴⁸ and given that the state is requiring Independence Units 1 and 2 to switch to low sulfur coal within 3 years under the long-term strategy, which is expected to reduce SO₂ emissions and result in visibility improvements at Arkansas' Class I areas, it is not unreasonable for Arkansas to weigh the factors in the way that it did and conclude that no SO₂ controls under the reasonable progress requirements are necessary for the Independence facility in the first implementation period. We are finalizing our approval of Arkansas' reasonable progress determination with respect to the Independence facility and all other Arkansas sources.

Comment: The proposed reasonable progress determination with respect to the Independence facility is arbitrary, capricious, and contrary to law because EPA's and ADEQ's reliance on the visibility "glidepath" is an excuse for avoiding pollution reductions and is unlawful. ADEQ unlawfully concluded that no additional controls are required at Independence largely because the state is on the "glidepath" toward natural visibility in distant decades. However, the glidepath is not an independently enforceable requirement and being "on the glidepath" does not relieve the state of conducting a reasoned analysis. EPA should revise its proposed rule to make clear that ADEQ's reliance on the "glidepath" as an excuse to allow unabated air pollution from the Independence facility is unlawful and unreasonable.

Response: We disagree with the commenter that ADEQ concluded that no additional controls are required at Independence because the state's Class I areas are on the glidepath. Instead, ADEQ's determination on reasonable progress with respect to the Independence facility was based on its consideration and weighing of the four reasonable progress factors, as well as

⁴⁸ EPA is revising its assessment of ADEQ's consideration of capital costs in the state's reasonable progress determination for Independence. We are clarifying that our evaluation and conclusion in this final action that Arkansas' reasonable progress determination is reasonable does not rely on Arkansas' consideration of capital costs because Arkansas' decision to consider the capital costs of scrubber controls in its analysis was based on Entergy's anticipated early cessation of coal combustion at the Independence facility, which is not state- or federally-enforceable. However, EPA continues to find that ADEQ's determination is reasonable based on the totality of the circumstances.

consideration of potential visibility benefit of controls, which the state deemed to be a relevant factor for consideration in its analysis. We noted in our proposal that the statutory factor that appears to have been the most significant in Arkansas' reasonable progress determination with respect to the Independence facility is the cost of compliance, along with consideration of visibility benefits.⁴⁹ As such, we disagree that ADEQ's determination was based solely or primarily on the fact that the state's Class I areas are on the glidepath toward natural visibility. Regardless of any consideration Arkansas might have placed on the fact that the state's Class I areas are on the glidepath in making its reasonable progress determination, our proposed and final approval is not based on the Class I areas' position with respect to the glidepath. We explained in our proposal that considering the state's concerns about the cost of the evaluated controls⁵⁰ and given that the state is requiring Independence Units 1 and 2 to switch to low sulfur coal within 3 years under the long-term strategy, which is expected to reduce SO₂ emissions and result in visibility improvements at Arkansas' Class I areas, we found that it is not unreasonable for Arkansas to conclude that SO₂ controls under the reasonable progress requirements are not necessary for the Independence facility in the first implementation period.⁵¹ Our proposal further stated that one of the components forming the basis of our proposed approval is "the state's evaluation and reasonable weighing of the four statutory factors along with consideration of the visibility benefits of controls for the Independence facility."⁵² As is evident from our discussion of "degree of improvement in visibility" in the proposal, ADEQ considered the potential visibility benefits of controls in its analysis of controls for Independence, as opposed to visibility

⁴⁹ 83 FR 62232.

⁵⁰ As explained elsewhere in this section of the notice, EPA is revising its assessment of ADEQ's consideration of capital costs in the state's reasonable progress determination for Independence. However, EPA continues to find that ADEQ's determination is reasonable based on the totality of the circumstances.

⁵¹ 83 FR 62233.

⁵² 83 FR 62233.

conditions in relation to the glidepath.⁵³ We did not point to the glidepath as a basis for our approval of the state's reasonable progress analysis and determination. Therefore, the commenter is incorrect in contending that EPA is relying on the visibility glidepath as a reason for not requiring pollution reductions at the Independence facility.

Comment: ADEQ cites the high capital costs of new scrubbers as a basis for declining to require them for the Independence facility. This is inappropriate because the capital costs are already assessed in the calculation of cost-effectiveness and the rejection of a control on the basis of capital costs neglects consideration of the benefits of that control, which could justify that cost.

Response: While the commenter is correct that Arkansas considered capital costs in its four-factor analysis and that its reasonable progress determination was based in part on the capital cost of controls, this was not the only factor Arkansas considered and based its decision on. Arkansas considered the cost of controls in the form of cost-effectiveness (\$/ton) and capital costs, in addition to also considering the remaining reasonable progress factors and the anticipated visibility improvement of controls, as it deemed consideration of visibility to be a relevant factor in its reasonable progress analysis. Arkansas noted that the evaluation of the \$/dv metric demonstrated a greater difference in cost between dry FGD and low sulfur coal compared to the \$/ton metric, and ultimately concluded that the controls it evaluated would cost millions of dollars for what it considers to be little visibility benefit. Thus, Arkansas' reasonable progress determination with respect to the Independence facility was based on its consideration and weighing of the costs of compliance and the other reasonable progress factors, as well as visibility.

⁵³ 83 FR 62229.

We do note that based on comments we received and having given the matter further consideration, we realize that Arkansas' consideration of capital costs in the four-factor analysis for the Independence facility is not appropriate because the state's decision to consider capital costs was rooted in Entergy's anticipated early cessation of coal combustion at the Independence facility, which is not state- or federally-enforceable. Considering the capital costs of controls in this context would be equivalent to inappropriately assuming a shorter remaining useful life for Independence in the cost-effectiveness calculation based on an unenforceable measure to change future operations. Therefore, we are clarifying that our evaluation and conclusion in this final action that Arkansas' reasonable progress determination is reasonable does not rely on Arkansas' consideration of capital costs. EPA's long-standing position in other regional haze actions is that consideration of certain cost metrics such as capital costs and \$/dv are not appropriate bases for rejecting controls that would have otherwise been determined to be reasonable. However, given the totality of the circumstances in this case, including the SIP's requirement for Independence Units 1 and 2 to switch to low sulfur coal within 3-years under the long-term strategy, the anticipated emissions reductions due to the implementation of BART controls required by the SIP revision,⁵⁴ and the anticipated cessation of coal combustion at Independence by the end of 2030, we continue to find that Arkansas reasonably exercised its discretion in determining that no SO₂ controls are necessary under reasonable progress for the Independence facility in the first implementation period. We do note that we are merely clarifying the basis for our approval of Arkansas' reasonable progress determination, but the outcome of our evaluation and our decision to approve the state's reasonable progress determination remain unchanged from proposal.

⁵⁴ See "Arkansas Regional Haze SO₂ and PM SIP Revision," section V.E, page 53.

Comment: EPA should disapprove Arkansas' method of identifying sources for further analysis under reasonable progress because Arkansas failed to appropriately evaluate area sources, in particular concentrated animal feeding operations (CAFO's). This is despite clear evidence in the record that area sources, such as CAFO's, are a significant part of the haze problem in Arkansas. CAFO's, which are a source of ammonia emissions, are likely a significant contributor to haze in Arkansas and ADEQ should have evaluated the cost-effectiveness of controlling emissions from these sources.

Response: We disagree with the commenter that Arkansas' reasonable progress analysis was inappropriate with respect to its treatment of area sources, which includes CAFO's. EPA's Guidance for Setting Reasonable Progress Goals Under the Regional Haze Program (EPA's Reasonable Progress Guidance) provides that the reasonable progress analysis involves identification of key pollutants and source categories that contribute to visibility impairment at the Class I area.⁵⁵ The guidance provides that once the key pollutants contributing to visibility impairment at each Class I area have been identified, the sources or source categories responsible for emitting these pollutants or pollutant precursors can also be determined.⁵⁶ The reasonable progress factors are then to be applied to the key pollutants and sources or source categories contributing to visibility impairment at each affected Class I area.

The approach taken by Arkansas in its reasonable progress analysis involved an assessment of both region-wide Particulate Source Apportionment Technology (PSAT) data and

⁵⁵ See EPA's "Guidance for Setting Reasonable Progress Goals under the Regional Haze Program" (June 1, 2007), page 3-1. The guidance document can be found at the following link: https://www3.epa.gov/ttn/naaqs/aqmguidance/collection/cp2/20070601_wehrum_reasonable_progress_goals_reghaze.pdf.

⁵⁶ See EPA's "Guidance for Setting Reasonable Progress Goals under the Regional Haze Program" (June 1, 2007), page 3-1.

PSAT data for Arkansas sources.⁵⁷ Based on this assessment, Arkansas identified sulfate (SO₄) as the key species contributing to light extinction at Caney Creek and Upper Buffalo. Arkansas further determined that the primary driver of SO₄ formation is emissions of SO₂ from point sources both region-wide and in Arkansas. As such, Arkansas decided to focus on point sources emitting at least 250 tpy of SO₂ to determine whether their emissions and proximity to Arkansas Class I areas warranted further analysis using the four statutory factors. Arkansas did assert that when all source categories within Arkansas are considered, light extinction due to Arkansas area sources is greater compared to the light extinction due to Arkansas point sources at both Caney Creek and Upper Buffalo on the 20% worst days in 2002. However, Arkansas explained that the cost of controlling many individual small area sources may be difficult to quantify. CAFO's fall under the category of small area sources and it is therefore likely that Arkansas would find it difficult to quantify the cost of controlling emissions from CAFO's. While we acknowledge the commenter's concerns regarding the visibility impact of ammonia emissions from CAFO's, we note the BART Guidelines provide that states should use their best judgment in deciding whether ammonia emissions from a source are likely to have an impact on visibility in an area, as controlling ammonia emissions in some areas may not have a significant impact on visibility.⁵⁸ The BART Guidelines further provide that given that air quality modeling may not be feasible for individual sources of ammonia, states should also exercise their judgement in assessing the degree of visibility impacts due to emissions of ammonia or ammonia compounds.⁵⁹ Since our

⁵⁷ As part of its reasonable progress analysis, ADEQ provided a discussion of the results of air quality modeling performed by the Central Regional Air Planning Association (CENRAP) in support of SIP development in the central states region. The CENRAP modeling included Particulate Source Apportionment Technology Tool (PSAT) with CAMx version 4.4, which was used to provide source apportionment by geographic regions and major source categories for pollutants that contribute to visibility impairment at each of the Class I areas in the central states region.

⁵⁸ 40 CFR part 51, appendix Y, II(A)(3).

⁵⁹ 40 CFR part 51, appendix Y, II(A)(3).

2007 Reasonable Progress Guidance does not itself provide recommendations on how sources of ammonia should be addressed in the reasonable progress analysis, we believe it would be reasonable for states to rely on the BART Guidelines in this instance for addressing ammonia emissions under the reasonable progress analysis. Therefore, we find that Arkansas' decision not to evaluate sources of ammonia emissions in its reasonable progress analysis to be reasonable. We find that Arkansas has provided a reasoned basis for the approach it took to identify sources for further consideration in the reasonable progress analysis and we find that it is reasonable for Arkansas to arrive at the decision not to further examine area sources in its reasonable progress analysis for the first implementation period. We also note that states may prioritize their planning in the manner that best suits their circumstances, so long as they demonstrate that their prioritization is reasonable given the statutory requirement to make reasonable progress. Our 2007 Reasonable Progress Guidance provides that states may wish to defer emission reductions to later planning periods, which ADEQ cites in its SIP,⁶⁰ since the long-term goal of no manmade impairment encompasses several planning periods.⁶¹ We find that ADEQ has appropriately decided to focus on the point source category for evaluation of SO₂ emissions reductions in the reasonable progress analysis for the first planning period. In future planning periods, it may be appropriate for Arkansas to reevaluate the benefit of addressing emissions from area sources, which will likely become more important as emissions from other source categories are reduced.

⁶⁰ See pages 28-53 of Arkansas Final Regional Haze Phase II SIP.
https://www3.epa.gov/ttn/naaqs/aqmguid/collection/cp2/20070601_wehrum_reasonable_progress_goals_reghaze.pdf

⁶¹ See Section 1.2 of EPA's "Guidance for Setting Reasonable Progress Goals under the Regional Haze Program" (June 1, 2007).
https://www3.epa.gov/ttn/naaqs/aqmguid/collection/cp2/20070601_wehrum_reasonable_progress_goals_reghaze.pdf

Comment: Although the commenter supports EPA's proposal to approve ADEQ's reasonable progress determination, which requires no additional controls on sources in Arkansas for the first planning period, the commenter believes that a four-factor analysis was not required because controls are not necessary to ensure reasonable progress for the first planning period. The threshold issue when addressing reasonable progress is whether further actions are necessary to ensure that visibility improvement is continuing toward background levels (i.e., on or below the uniform rate of progress (URP)). Since Arkansas' Class I areas are below the URP and are already meeting the RPGs Arkansas established in the SIP revision, a reasonable progress analysis was not required.

Response: While we appreciate the commenter's support of our proposed approval of Arkansas' reasonable progress determination, we disagree with the commenter that it was not necessary for Arkansas to conduct a reasonable progress analysis for the first implementation period. The Clean Air Act requires that states' SIPs contain a long-term strategy for making reasonable progress, and that in determining reasonable progress states must consider the very four-factor analysis which the commenter purports is not needed. The Regional Haze Rule implements the statutory requirements and provides that states must determine whether controls are necessary to ensure reasonable progress based on four statutory factors. The preamble to the 1999 Regional Haze Rule states that "... EPA is not specifying in this final rule what specific control measures a State must implement in its initial SIP for regional haze. That determination can only be made by a State once it has conducted the necessary technical analyses of emissions, air quality, and the other factors that go into determining reasonable progress."⁶² The Regional Haze Rule clearly states that the technical analysis of the four factors that determines what is

⁶² 64 FR 35721.

necessary for reasonable progress occurs prior to a reasonable progress determination, including in cases where the reasonable progress determination is that no further controls are required under reasonable progress.⁶³

CAA section 169A(g)(1) provides that reasonable progress is determined by consideration of (1) the costs of compliance, (2) the time necessary for compliance, (3) the energy and nonair quality environmental impacts of compliance, and (4) the remaining useful life of any existing source subject to such requirements. The Regional Haze regulations under § 51.308(d)(1)(i)(A) also require consideration of these four statutory factors when establishing the RPGs for a Class I area, along with a demonstration showing how these factors were taken into consideration in selecting the goal.

The statute and regulations are both clear that the states have the authority and obligation to evaluate the four reasonable progress factors and that the decision regarding the controls required to make reasonable progress and the subsequent establishment of the RPGs must be based on these factors identified in CAA section 169A(g)(1) and the Regional Haze regulations under § 51.308(d)(1)(i)(A). The URP framework is not based on the four statutory factors, but is instead an analytical tool created by extrapolating emission reductions from the mid-1990s through approximately 2005 into the future.⁶⁴ While § 51.308(d)(1)(i)(B) of the Regional Haze regulations requires that a state also consider the URP glidepath in establishing the RPGs, this does not mean that no further analysis or controls are required as long as a state's Class I areas are below the URP, as the commenter contends. In fact, the preamble to the 1999 Regional Haze Rule reinforces that the amount of progress that is reasonable is defined based on the statutory

⁶³ See 64 FR 35714 at 35721 and 35731- 35735 and 35734 (July 1, 1999).

⁶⁴ See 64 FR 35731-35733.

factors, notwithstanding the URP.⁶⁵ Clearly, a state's obligation to evaluate the four statutory factors and set RPGs based on CAA section 169A(g)(1) and § 51.308(d)(1) applies in all cases, without regard to the Class I area's position relative to the URP. There is nothing in the CAA or Regional Haze regulations that suggests that a state's obligation to ensure reasonable progress can be met by just meeting the URP.⁶⁶

We note that our conclusion here is consistent with our final action on the 2008 Arkansas Regional Haze SIP, where we disapproved Arkansas' RPGs and found that Arkansas had not met its reasonable progress obligations precisely because the state established its RPGs without conducting an evaluation of the four statutory factors and did so based on the fact that its Class I areas were below the URP glidepath. In the preamble to our final action on the 2008 Arkansas Regional Haze SIP, we were clear that an evaluation of the four statutory factors is required regardless of the Class I area's position relative to the URP glidepath:

[B]eing on the "glidepath" does not mean a state is allowed to forego an evaluation of the four statutory factors when establishing its RPGs. Based on an evaluation of the four statutory factors, states may determine that RPGs that provide for a greater rate of visibility improvement than would be achieved with the URP for the first implementation period are reasonable.⁶⁷

⁶⁵ 64 FR 35732.

⁶⁶ See 77 FR 14604, at 14629.

⁶⁷ 77 FR 14629.

Our final action on the Arkansas Regional Haze SIP was published in the Federal Register on March 12, 2012, and became effective on April 11, 2012. Our final action disapproving Arkansas' reasonable progress determination and RPGs and our position with regard to the URP was not challenged. We reiterate in this final action that the CAA and Regional Haze regulations require an analysis of the four reasonable progress factors regardless of a Class I area's position relative to the URP and that being below the glide path does not automatically mean that no controls are necessary under reasonable progress.

With regard to the commenter's argument that it was not necessary for Arkansas to conduct a four-factor analysis given that Arkansas Class I areas are already meeting the RPGs established in the SIP revision, we note first that this is a circular argument. The numeric RPGs are calculated by taking into account the visibility improvement anticipated from enforceable emission limitations and other control measures (including BART, reasonable progress, and other "on the books" controls). Thus, the RPGs for the first planning period represent the best estimate of the degree of visibility improvement that will result in 2018 from changes in emissions inventories, changes driven by the particular set of control measures the state has adopted in its regional haze SIP to address visibility, as well as all other enforceable measures expected to reduce emissions over the period of the SIP from 2002 to 2018.⁶⁸ To argue that a four-factor analysis is not needed because the RPGs, which are based in part on the outcome of that very four-factor analysis, are at a certain level is circular. Furthermore, the Regional Haze Rule provides that the emission limitations and control measures established under BART and under the reasonable progress determinations are what is enforceable, not the RPGs

⁶⁸ 64 FR 35733.

themselves.⁶⁹ EPA cannot enforce an RPG in the sense of seeking to apply penalties on a state for failing to meet the RPG or obtaining injunctive relief to require a state to achieve its RPG. However, the long-term strategy can and must contain emission limits and other control measures that apply to specific sources, and that are themselves enforceable. Meeting or being projected to meet the RPG does not automatically demonstrate that a state has satisfied its requirements under BART and reasonable progress.

Comment: The commenter supports EPA’s proposal to approve ADEQ’s reasonable progress determination, which requires no additional controls on sources in Arkansas for the first planning period. However, Arkansas’ reasonable progress analysis “broadly applicable” to Arkansas sources was sufficient to satisfy the reasonable progress requirements and Arkansas surpassed the CAA requirements when it nonetheless undertook an analysis that applied the four reasonable progress factors to the Independence facility. EPA inappropriately proposed to conclude that the broad analysis was merely “informative” and “not a determinative component of the state’s reasonable progress analysis.” Even if a four-factor analysis were necessary in this case, ADEQ’s broad analysis was sufficient to satisfy its reasonable progress obligations, making a site-specific four-factor analysis for Independence unnecessary. ADEQ’s broad approach was appropriate, as there is no requirement that a reasonable progress analysis be performed on a source-specific basis. EPA should conclude that this broad analysis was sufficient and rendered further analysis, including any source-specific four-factor analysis, unnecessary.

Response: While we appreciate the commenter’s support of our proposed approval of ADEQ’s reasonable progress determination, we disagree with the commenter that the broad analysis included in ADEQ’s SIP revision satisfies this reasonable progress obligation and note

⁶⁹ 64 FR 35733.

that it is not a basis for our approval of ADEQ's reasonable progress analysis. While it may not be necessary to conduct a source-specific analysis of the four factors in all instances to satisfy the reasonable progress obligations,⁷⁰ we do not agree that the broad analysis provided in ADEQ's SIP revision complies with the applicable statutory and regulatory requirements. As discussed further below, the broad analysis of a group of sources provided by ADEQ in the SIP revision does not clearly identify any sources or controls that were evaluated in the state's weighing of the costs and other statutory factors nor did it estimate in specific numeric form the cost of controls, making it clear that the dispositive consideration in the broad analysis was visibility conditions with respect to the URP.⁷¹ Therefore, we find that the broad analysis presented in the SIP revision does not satisfy Arkansas' reasonable progress obligations. ADEQ's broad analysis does not discuss pollutants or identify possible specific controls for these pollutants or for source categories for these pollutants. Instead, in evaluating the costs of compliance, the broad analysis discusses in a very generic manner the anticipated impact of additional costs of compliance on the health and vitality of industries within the state and on Arkansas ratepayers, without ever even identifying the potential controls or discussing actual cost estimates.

Moreover, ADEQ itself deemed the application of the four factors to the Independence facility necessary, stating in the SIP revision that "due to the circumstances of the 2016 AR RH FIP, which applied the factors to a single facility, Independence, ADEQ has determined that application of the four factors to the specific source analyzed by EPA is also "relevant."⁷² The SIP revision further explains that for this reason, "ADEQ has performed both a broader analysis

⁷⁰ On the contrary, we discussed in our proposal that we agree that an approach that involves a broad analysis of groups of sources or source categories may be appropriate in certain cases, as provided by EPA's Reasonable Progress Guidance. 83 FR 62232.

⁷¹ 83 FR 62232.

⁷² See "Arkansas Regional Haze SO₂ and PM SIP Revision," section V, page 30.

using the four factors as well as a more narrow analysis specific to Independence before determining whether any controls are necessary.”⁷³ ADEQ did not reach a final determination regarding reasonable progress until after evaluating large point sources individually to identify sources for potential further evaluation under the four reasonable progress factors and conducting a more narrow and focused analysis on those sources. In this case, one source was identified for further evaluation under the four reasonable progress factors, specifically, the Independence facility. Therefore, we are concluding that the state’s broad analysis of a group of sources was not a determinative component of the state’s reasonable progress analysis. We appreciate the thoroughness of the state’s reasonable progress analysis but reiterate and clarify, as necessary, here that the broad analysis is not a component of our finding that the state has satisfied the reasonable progress requirements.⁷⁴

Although we disagree with the commenter that the broad analysis included in ADEQ’s SIP revision satisfies Arkansas’ reasonable progress obligations, we are finalizing our proposed approval of ADEQ’s reasonable progress determination based on the following: (1) the state’s discussion of the key pollutants and source categories that contribute to visibility impairment in Arkansas’ Class I areas per the CENRAP’s source apportionment modeling; (2) the state’s identification of a group of large SO₂ point sources in Arkansas for potential evaluation of controls under reasonable progress; (3) the state’s rationale for narrowing down its list of potential sources to evaluate under the reasonable progress requirements; and (4) the state’s evaluation and reasonable weighing of the four statutory factors along with consideration of the visibility benefits of controls for the Independence facility.

⁷³ See “Arkansas Regional Haze SO₂ and PM SIP Revision,” section V, page 30.

⁷⁴ See 83 FR 62233 (laying out the four components of ADEQ’s reasonable progress analysis on which EPA based its proposed approval).

Comment: No additional controls can be considered for reasonable progress at sources in Arkansas since no controls could be implemented before the end of the first planning period in 2018. EPA’s regulations require SIPs to consider “the emission reduction measures needed to achieve [reasonable progress goals] for the period covered by the implementation plan.” 40 CFR § 51.308(d)(1)(i)(B). In staying the effectiveness of EPA’s Regional Haze FIP for the state of Texas, the U.S. Court of Appeals for the Fifth Circuit explained that “[t]he emissions controls included in a state implementation plan. . . must be those designed to achieve the reasonable progress goal for the period covered by the plan,” and that the parties challenging the FIP “persuasively argue that [EPA’s requirement that power plants meet Reasonable Progress goals by installing scrubbers in 2019 and 2021] exceeds the power granted by the Regional Haze Rule.” *Texas v. EPA*, 829 F.3d 405, 429 (5th Cir. 2016) (internal citations omitted). It is therefore inappropriate to require reasonable progress controls in a SIP for the first planning period when the controls cannot be installed or result in visibility benefits in that planning period.

Response: The Fifth Circuit stay decision cited by the commenter suggested that it was likely that the EPA had exceeded its statutory authority by imposing emission controls that go into effect after the end of the implementation period in the Texas Regional Haze FIP. This assessment is incorrect. First, we note that the decision, by a Fifth Circuit motions panel, did not cite to a provision of the CAA to support the proposition that the EPA exceeded its statutory authority, as the CAA contains no such constraint. Subsequent to the Fifth Circuit decision to grant a stay of the EPA’s Texas FIP, EPA finalized its revisions to the Regional Haze Rule, and, in the process, clarified its long-standing interpretation of the relationship between long-term strategies and RPGs. As stated in the final rule, “portions of the stay decision indicate a

fundamental misunderstanding of aspects of the visibility program and the EPA's action on the Oklahoma and Texas regional haze SIPs." 82 FR 3078, 3087 (January 10, 2017). CAA section 169A(b)(2)(B) requires that SIPs include "a long-term (ten to fifteen years) strategy for making reasonable progress toward meeting the national goal." In our rulemaking, we noted that "ten to fifteen years" was ambiguous and could either mean that the long-term strategy must be updated every ten to fifteen years or that it must be fully implemented within ten to fifteen years. To impose the latter interpretation would restrict states' or the EPA's ability to require controls that could not be fully implemented before the end of the implementation period and would incentivize states to delay the submission of a regional haze SIP since they could essentially "run out the clock." Further, EPA's 2007 reasonable progress guidance specifically recognized that the time needed for full implementation of a control measure might extend beyond the end of the implementation period.⁷⁵ Additionally, EPA does not lose its authority to regulate after a deadline, even a mandatory deadline, has passed; rather, the appropriate remedy is a court order compelling the agency to fulfill the regulatory obligation. For a more in-depth discussion on this issue, please see our final rule at 82 FR 3078, 3087-3089.

Comment: Although EPA should finalize its approval of ADEQ's reasonable progress determination, EPA's analysis of the application of DSI and enhanced DSI at the Independence facility should not be part of EPA's final action. ADEQ did not assess these two control technologies in its four-factor analysis for Independence, nor was it required to. Therefore, EPA's DSI and enhanced DSI analyses are inappropriate and extraneous and should not be included in the final action, as EPA has no authority under the CAA to substitute its judgment for

⁷⁵ See Guidance for Setting Reasonable Progress Goals under the Regional Haze Program, June 1, 2007.

that of the state's. Nevertheless, the commenter does agree that DSI and enhanced DSI are not required under reasonable progress.

Response: We appreciate the commenter's support of our proposal to approve ADEQ's reasonable progress determination. While ADEQ's decision to not evaluate DSI or enhanced DSI at the Independence facility does not change the result of the state's determination and we are therefore approving that determination here, we disagree that our analysis of DSI and enhanced DSI at Independence should not be part of our final action. As we explained in our proposal, since the White Bluff and Independence facilities are sister facilities with nearly identical units and comparable levels of annual SO₂ emissions, and since both DSI and enhanced DSI were evaluated in the BART analysis for White Bluff Units 1 and 2, we find it appropriate to consider these controls in the four-factor analysis for the Independence facility as well.⁷⁶ However, neither the SIP revision nor Entergy's four factor analysis for controls on the Independence facility considered DSI or enhanced DSI as control options. Therefore, we provided this information in our proposal to demonstrate that even if ADEQ had considered DSI and enhanced DSI in its reasonable progress analysis for the Independence facility, it likely would not have changed the state's final determination on reasonable progress.⁷⁷ We note that we estimated the cost-effectiveness of DSI and enhanced DSI at the Independence facility by relying on Entergy's estimates of the capital costs and annual operation and maintenance costs of these controls for White Bluff. Thus, based on the results of our analysis of DSI and enhanced DSI, we do not consider the omission of consideration of DSI and enhanced DSI as control options for SO₂ at the Independence facility to be an impediment to approving ADEQ's reasonable progress analysis. Without the results of our analysis of DSI and enhanced DSI for the Independence

⁷⁶ 83 FR 62232.

⁷⁷ 83 FR 62232.

facility, we would not be able to arrive at the conclusion that ADEQ's omission did not impact our ultimate conclusion regarding the state's reasonable progress analysis. Therefore, we disagree with the commenter that our analysis of DSI and enhanced DSI for the Independence facility is unnecessary in our review and approval of ADEQ's reasonable progress analysis

Comment: The commenter agrees that Independence is not subject to BART, that no additional controls beyond use of low-sulfur coal at Independence are necessary to achieve reasonable progress and agrees with the adoption of low-sulfur coal as the long-term strategy for Independence.

Response: We appreciate the commenter's support of our proposal with respect to the Independence facility and the long-term strategy.

C. Clean Air Act Section 110(l)

Comment: EPA's proposed rule as a whole violates the Clean Air Act's "anti-backsliding" requirement, 42 U.S.C. 7410(l). Compared to the existing FIP, the State's plan would result in greater air pollution and greater visibility impairment at affected Class I areas. In the 2016 Arkansas FIP, EPA required Independence Units 1 and 2 to meet SO₂ emission limits based on the use of new scrubbers under the reasonable progress provisions. Now, EPA has proposed to approve a SIP revision that would replace those SO₂ emission limits with much higher limits based on the use of low-sulfur coal. In addition, whereas the existing FIP requires White Bluff Units 1 and 2 to meet SO₂ emission limits based on the use of new scrubbers, the proposed SIP revision would replace that requirement with a much higher emission limit based on the use of low sulfur coal. The SIP revision includes no reductions beyond those in the FIP that would compensate for allowing higher SO₂ emissions from both Independence and White

Bluff. As a result, EPA's proposed rule would authorize significantly more SO₂ emissions and produce worse air quality than the existing FIP. Section 110(l) of the Clean Air Act prohibits a plan revision that would weaken the existing FIP requirements in this manner. This increase in SO₂ emissions under the SIP relative to the FIP violates the Clean Air Act's anti-backsliding provision, which prohibits plan revisions that would interfere with attainment of the NAAQS or other "applicable requirements" of the Act and prohibits plan revisions that would interfere with an existing requirement to make reasonable further progress.

Response: We disagree that our rulemaking violates the CAA's requirements under section 110(l). The commenter mischaracterizes CAA section 110(l)'s requirements. Section 110(l) states that, "[t]he Administrator shall not approve a revision of a plan if the revision would interfere with an applicable requirement concerning attainment and reasonable further progress or any other applicable requirement of this chapter." First, the SIP revision will not interfere with the "applicable requirements" of the regional haze program. The CAA requires that the SIP "contain such emission limits, schedules of compliance and other measures as may be necessary to make reasonable progress toward meeting the national goal." The corresponding federal regulations found at 40 CFR 51.308 and appendix Y to part 51 detail the required process for determining the appropriate emission limits for the regional haze program. The State followed the prescribed process for determining the levels of control that are required for BART and reasonable progress. Our approval of the SIP revision is supported by our evaluation of the state's conclusions and our determination that the BART and reasonable progress requirements under the CAA are met. The rationale supporting that determination was presented in the notice of proposed rulemaking for this action.⁷⁸ For these reasons, our final approval of the SIP revision

⁷⁸ 83 FR 62204.

and concurrent withdrawal of the corresponding parts of the FIP will not interfere with the CAA requirements for BART or reasonable progress.

Second, the SIP revision will not interfere with any applicable requirement concerning attainment and reasonable further progress. EPA interprets CAA section 110(l) as applying to all NAAQS that are in effect, including those that have been promulgated but for which EPA has not yet made designations. EPA has concluded that 110(l) can be satisfied by demonstrating that substitute measures ensure that status quo air quality is preserved. However, 110(l) can also be satisfied by an air quality analysis demonstrating that any change in emissions will not interfere with any applicable requirement concerning attainment and reasonable further progress, or any other applicable CAA requirement. Noninterference with attainment of the NAAQS may be demonstrated by an air quality analysis showing that any emission changes associated with the revision will not interfere with attainment of the NAAQS. This option requires a showing that the area (as well as interstate and intrastate areas downwind) can attain the NAAQS even with the plan in its revised form. *See, e.g. Kentucky Resources Council, Inc. v. EPA*, 467 F.3d 986 (6th Cir. 2006).

Though the commenter is correct in noting that the higher SO₂ emission limits for White Bluff Units 1 and 2 contained in the SIP are replacing the more stringent SO₂ emission limits contained in the FIP, the commenter fails to consider that the SIP revision contains an Administrative Order making enforceable Entergy's voluntary plans to cease coal combustion at White Bluff Units 1 and 2 by December 31, 2028. Because the cessation of coal combustion will lead to emission reductions greater than the SO₂ emission reductions required for White Bluff under the FIP, the SIP revision with respect to the SO₂ limits for White Bluff will clearly not

interfere with attainment and reasonable further progress in the long term (i.e. after December 31, 2028).

While it is true that the FIP included more stringent SO₂ emission limits for Independence Units 1 and 2 than the SIP revision,⁷⁹ there is no evidence that withdrawal of the SO₂ limits in the FIP for White Bluff and Independence and the approval of the SO₂ emission limits in the SIP revision will interfere with attainment of the SO₂ NAAQS. At this time, and notwithstanding the fact that the FIP provisions have not gone into effect, the areas that would be potentially impacted by the increase in SO₂ emissions allowed under the SIP revision as compared to the FIP are attaining the 1-hour SO₂ NAAQS. Based on an assessment of current air quality in the areas most affected by this SIP revision, which we discuss in the paragraphs that follow, we are concluding that the near term less stringent SO₂ emissions limits in the SIP will not interfere with attainment of the NAAQS. Jefferson County, where the White Bluff facility is located, was designated by EPA as “attainment/unclassifiable,” for the 2010 1-hour SO₂ NAAQS in a rulemaking signed on June 30, 2016.⁸⁰ This area was able to attain the 2010 1-hour SO₂ NAAQS without the emissions limits that were promulgated in the FIP being implemented. In the same June 30, 2016 rulemaking, EPA designated Independence County, where the Independence facility is located, as “unclassifiable” for the 2010 1-hour SO₂ NAAQS.⁸¹ In a

⁷⁹ Entergy plans to cease coal combustion at Independence Units 1 and 2 by December 31, 2030, which we expect would result in comparable or greater SO₂ emissions reductions than required for the Independence facility under the FIP. However, this planned cessation of coal combustion at the Independence units by the end of 2030 is not required under the SIP revision.

⁸⁰ The EPA’s attainment/ unclassifiable designation for Jefferson County was based on, among other things, our evaluation of the State’s modeling that showed attainment, and which we concluded generally followed EPA guidance. See 81 FR 45039 (July 12, 2016).

⁸¹ The EPA’s unclassifiable designation for Independence County was based on, among other things, our evaluation of the State’s air dispersion modeling analysis, as well as the additional modeling analysis submitted by environmental groups for the area surrounding the Independence Steam Electric Station. Based on our evaluation of these analyses and our consideration of all available data and information, the EPA determined that the area cannot be classified as meeting or not meeting the NAAQS based on information available at the time. See 81 FR 45039 (July 12, 2016).

subsequent rulemaking signed on March 7, 2019, EPA approved the State of Arkansas' request to redesignate Independence County from unclassifiable to attainment/unclassifiable based on a new modeling analysis provided by the State.⁸² In a rulemaking signed on December 21, 2017, EPA designated all remaining areas in Arkansas as attainment/unclassifiable.⁸³ On March 18, 2019, EPA finalized a rule which retained the 2010 1-hour SO₂ standard. At the time that Independence County, Jefferson County, and all other areas in Arkansas were designated or redesignated as attainment/unclassifiable under the 2010 1-hour SO₂ NAAQS in June 2016, December 2017, and March 2019, Independence Units 1 and 2 and White Bluff Units 1 and 2 were emitting SO₂ at levels not restricted by SIP or FIP limits. So the establishment of the SIP limits based on low sulfur coal will not interfere with attainment of the SO₂ NAAQS in the near term. In the long term, the cessation of coal combustion at White Bluff will result in more reductions in SO₂ emissions than the FIP and will result in further improvement in air quality.

Since sulfate is a precursor to particulate matter, there is also a need to address whether withdrawal of the FIP and approval of the SIP revision will interfere with attainment of the PM NAAQS. There is no evidence that withdrawal of the SO₂ limits in the FIP and the approval of the SO₂ emission limits in the SIP revision will interfere with attainment of the PM NAAQS. At this time, and notwithstanding the fact that the FIP provisions have not gone into effect, the areas that would be potentially impacted by the increase in SO₂ emissions are attaining the 2012 annual PM_{2.5} NAAQS. In a Federal Register document signed on January 15, 2015, EPA designated all areas in Arkansas as unclassifiable/attainment under the 2012 annual PM_{2.5}

⁸² EPA determined that the modeling analysis submitted by the State appropriately characterized the air quality in Independence County, Arkansas, and predicted that ambient SO₂ concentrations are below the 1-hour SO₂ NAAQS. See 84 FR 8986 (March 13, 2019).

⁸³ The EPA's designations for remaining areas in the state were based on an assessment and characterization of air quality through ambient air quality data, air dispersion modeling, other evidence and supporting information, or a combination of the above. See 83 FR 1098 (January 9, 2018).

NAAQS.⁸⁴ All areas in Arkansas were able to attain the 2012 annual PM_{2.5} NAAQS before the SO₂ and PM emissions limits from the FIP were promulgated.

While the FIP provisions might have produced better air quality than the provisions we are approving into the SIP, CAA section 110(l) does not require that each SIP revision include greater emissions reductions than the plan being revised or replaced. Instead, section 110(l) requires a showing that approval of the SIP revision will not interfere with attainment and reasonable further progress or any other applicable CAA provision. In this case, the relevant areas are attaining the SO₂ and PM NAAQS even though the units at White Bluff and Independence are emitting SO₂ at levels not restricted by SIP or FIP limits. Thus, by approving the State's 0.60 lb/MMBtu SO₂ emission limits for White Bluff Units 1 and 2 and Independence Units 1 and 2, the EPA is approving limits that will further reduce emissions from the levels that were already sufficient to designate the potentially impacted areas as attainment/unclassifiable for both the 1-hour SO₂ NAAQS and the 2012 annual PM_{2.5} NAAQS. Thus, there is no evidence to suggest that areas will not continue to attain the NAAQS following our approval of the SIP and concurrent withdrawal of the FIP.⁸⁵ Therefore, we find that EPA approval of the 0.60 lb/MMBtu SO₂ BART emission limits for White Bluff Units 1 and 2 and the 0.60 lb/MMBtu SO₂ emission limits for Independence Units 1 and 2 under the long-term strategy will not

⁸⁴ 80 FR 2206.

⁸⁵ We also note that for any area where modeling of actual SO₂ emissions served as the basis for designating such area as attainment of the 2010 1-hour SO₂ NAAQS, the SO₂ Data Requirements Rule under 40 CFR section 51.1205 requires the submission of an annual report that documents the annual SO₂ emissions of each applicable source in each such area and provides an assessment of the cause of any emissions increase from the previous year. That report must also include a recommendation regarding whether additional modeling is needed to characterize air quality in any area to determine whether the area continues to meet the 2010 1-hour SO₂ NAAQS. Since modeling of actual SO₂ emissions served as the basis for EPA's designation of Jefferson County, where the White Bluff facility is located, and redesignation of Independence County, where the Independence facility is located, this annual reporting requirement applies to ADEQ. The data and other information provided by ADEQ in this annual report will help EPA assess whether actual annual SO₂ emissions from White Bluff, Independence, and other sources in Arkansas have increased to such an extent that there is uncertainty as to whether the areas where these sources are located continue to meet the 2010 1-hour SO₂ NAAQS. At this time, no reports have been submitted by ADEQ that indicate that revised modeling of SO₂ emissions from sources in Jefferson and Independence Counties is warranted.

interfere with attainment of the 2010 1-hour SO₂ NAAQS or the 2012 annual PM_{2.5} NAAQS under CAA section 110(l).

Additionally, since there are no areas in Arkansas designated nonattainment under the 2010 1-hour SO₂ NAAQS or the 2012 annual PM_{2.5} NAAQS, the increase in SO₂ emissions would not impact any such nonattainment areas in the state. We are also not aware of any nonattainment areas in downwind states that are likely to be impacted by these emissions.

While the comment appears to focus on SO₂ controls for the White Bluff and Independence facilities, to the extent that the commenter is contending that the SO₂ emission limits we are taking final action to approve for other facilities would also violate the CAA's requirements under section 110(l), we note that this claim is incorrect. As explained above, one way of demonstrating noninterference is by showing that the status quo air quality will be preserved. In this case, the SO₂ controls for all other sources in the Phase II SIP revision (i.e., AECC Bailey Unit 1, AECC McClellan Unit 1, AEP/SWEPCO Flint Creek Plant Boiler No. 1, Entergy Lake Catherine Unit 4, and the Entergy White Bluff Auxiliary Boiler), which we are taking final action to approve, are identical to those contained in the Arkansas FIP. All the PM BART controls in the Phase II SIP revision, which we are taking final action to approve, are also identical to those contained in the Arkansas FIP.

Comment: EPA's approval of ADEQ's SIP revisions is appropriate even though the SIP revision is not based on installation of the same control technology that was used to set the limits for White Bluff and Independence in the currently stayed FIP. While EPA has interpreted the CAA's anti-backsliding provision as allowing the Agency "to approve a SIP revision unless the agency finds it will make the air quality worse," that standard is inapplicable here where the existing requirements have not yet gone into effect and are the subject of administrative and

judicial challenges. Specifically, the SO₂ requirements for White Bluff and Independence were judicially stayed and cannot be deemed to represent the existing limitations applicable to the units. Thus, nothing in the SIP revision “weakens or removes any pollution controls.” To the contrary, the SIP revision would impose emission limitations that are better than the status quo.

Response: We agree with the commenter’s assertion that, in this particular case, our approval of the SIP is appropriate even though the SIP revision is not based on installation of the same control technology that was used to set the limits for White Bluff and Independence in the FIP. However, we disagree with the commenter’s characterization of the requirements of CAA 110 (l) and the commenter’s characterization of EPA’s interpretation of those requirements. Under section 110(l) of the CAA, the EPA cannot approve a plan revision if the revision would interfere with any applicable requirements concerning attainment and reasonable further progress of the NAAQS, or any other applicable requirement of the Act. Section 110(l) applies to all requirements of the CAA and to all areas of the country regardless of their attainment status. To evaluate whether a plan revision would interfere with any requirements, air pollutants whose emissions and/or ambient concentrations may change as a result of the revision must be identified. Noninterference with attainment of the NAAQS may be demonstrated by an air quality analysis showing that any emission changes associated with the revision will not interfere with attainment of the NAAQS. This option requires a showing that the area (as well as interstate and intrastate areas downwind) can attain the NAAQS even with the plan in its revised form. Noninterference may also be demonstrated by showing that the status quo air quality is preserved by the use of substitute measures to compensate for any emissions increases associated with the revision. *See Kentucky Resources Council v. EPA*, 467 F.3d 986 (6th Cir. 2006). A revision that maintains the status quo would not interfere with attainment of the NAAQS. *See Wildearth*

Guardians v. EPA, 759 F.3d 1064 (9th Cir. 2014). In general, the level of rigor needed for any 110(l) demonstration will vary depending on the nature of the revision, its potential impact on air quality and the air quality in the affected area.

D. Modeling

Comment: We received comments arguing that the CALPUFF model is unreliable and should not be used in making BART determinations. A commenter stated that although CALPUFF may have had some limited utility in the BART screening process, it should not be used in making an SO₂ BART determination for White Bluff due to its purported limitations in accuracy and precision given the distances to Class I areas and the atmospheric conditions involved, as well as limited chemistry mechanism and blanket background ammonia values. One commenter presumed that CAMx modeling for White Bluff would likely show negligible visibility improvements from each of the SO₂ controls evaluated and contended that SO₂ BART is therefore the use of low sulfur coal even without Entergy's voluntary decision to cease coal combustion at White Bluff. Commenters also argued that CALPUFF is no longer an EPA preferred model, and that EPA should instead rely on the Comprehensive Air Quality Model with Extensions (CAMx), which the commenter claims is more reliable in characterizing visibility impairment.

Response: As we discuss in the Response to Comments (RTC) Document associated with this rulemaking⁸⁶ and the RTC Document associated with the Arkansas Regional Haze FIP,⁸⁷ the

⁸⁶ See "Arkansas Regional Haze Phase II SIP Revision Response to Comments," which can be found in the docket associated with this final rulemaking.

⁸⁷ See "Response to Comments for the Federal Register Notice for the State of Arkansas; Regional Haze and Interstate Visibility Transport Federal Implementation Plan," dated 8/31/2016. See Docket ID. EPA-R06-OAR-2015-0189, Document ID. AR020.0187.

use of CALPUFF in the context of the Regional Haze rule provides results that can be used to evaluate the level of visibility benefits anticipated for each level of control and is one of several factors considered in the overall BART determination. In the rulemaking for the BART Guidelines, we responded to comments concerning the limitations and appropriateness of using CALPUFF, and we further addressed similar comments in the RTC document associated with the Arkansas Regional Haze FIP. We stated in the BART Guidelines that the visibility results from CALPUFF could be used as one of the five factors in a BART evaluation and the impacts could be utilized because CALPUFF was the best modeling method available to calculate potential impacts for a BART evaluation.⁸⁸ The regulatory status of CALPUFF was changed in the recent revisions to the Guideline on Air Quality Models (GAQM)⁸⁹ as far as the classification of CALPUFF as a preferred model for transport of pollutants for primary impacts, not impacts based on chemistry. The GAQM changes indicated that the change in model preferred status had no impact on the use of CALPUFF to determine the applicability of BART or the BART determination itself.⁹⁰ CALPUFF is an appropriate tool for BART evaluations and remains the recommended model for BART.

The commenter contends that CALPUFF may have had some limited utility in the BART screening process (i.e., making “subject-to-BART” determinations), but that its use for making a

⁸⁸ 70 FR 39123, 39124. “We understand the concerns of commenters that the chemistry modules of the CALPUFF model are less advanced than some of the more recent atmospheric chemistry simulations. To date, no other modeling applications with updated chemistry have been approved by EPA to estimate single source pollutant concentrations from long range transport.” and in discussion of using other models with more advanced chemistry it continues, “A discussion of the use of alternative models is given in the Guideline on Air Quality in appendix W, section 3.2.”

⁸⁹ 82 FR 5182, 5196 (Jan. 17, 2017).

⁹⁰ 82 FR 5182, 5196 (Jan. 17, 2017). “As detailed in the preamble of the proposed rule, it is important to note that the EPA’s final action to remove CALPUFF as a preferred appendix A model in this Guideline does not affect its use under the FLM’s guidance regarding AQRV assessments (FLAG 2010) nor any previous use of this model as part of regulatory modeling applications required under the CAA. Similarly, this final action does not affect the EPA’s recommendation [See 70 FR 39104, 39122-23 (July 6, 2005)] that states use CALPUFF to determine the applicability and level of best available retrofit technology in regional haze implementation plans.”

BART determination for White Bluff is not appropriate. We disagree with this contention. The BART Guidelines provide that states should establish a threshold that should be no higher than 0.5 deciviews for determining whether sources contribute to visibility and are therefore subject to BART⁹¹ and recommend the use of CALPUFF⁹² to predict the visibility impacts from a single source at a Class I area to compare against this threshold as well as to help inform the BART determination.⁹³ The CALPUFF modeling ADEQ relied on in its SO₂ BART determination for White Bluff is consistent with the BART Guidelines and Appendix W. Nearly every BART determination made since the promulgation of the Regional Haze Rule and the BART Guidelines has utilized the CALPUFF modeling method in analyzing impacts. Absent any additional information that would justify not using the CALPUFF model in this particular case, it is appropriate for the state to rely on CALPUFF modeling as it has done to support the White Bluff BART determination, consistent with the modeling for nearly every other BART determination EPA has reviewed and acted upon. EPA also concluded from the evaluation of the Interagency Workgroup on Air Quality Modeling (IWAQM) Phase 2 Report case studies that the CALPUFF dispersion model performs in a reasonable manner and has no apparent bias toward over or under prediction, so long as the transport distance is limited to less than 300 km.^{94,95} We note that since the BART Guidelines were finalized in 2005 there has been more modeling with CALPUFF for BART and PSD primary impact purposes and the general community has utilized CALPUFF in

⁹¹ 40 CFR 51 Appendix Y, III(A)(1): “As a general matter, any threshold that you use for determining whether a source “contributes” to visibility impairment should not be higher than 0.5 deciviews.”

⁹² 40 CFR 51 Appendix Y, III(A)(3): “CALPUFF is the best regulatory modeling application currently available for predicting a single source’s contribution to visibility impairment”

⁹³ 70 FR 39123: “...we *also* recommend that the States use CALPUFF as a screening application in estimating the degree of visibility improvement that may reasonably be expected from controlling a single source in order to inform the BART determination.”

⁹⁴ Interagency Workgroup on Air Quality Modeling (IWAQM) Phase 2 Summary Report and Recommendations for Modeling Long-Range Transport Impacts. Publication No. EPA-454/R-98-019. Office of Air Quality Planning & Standards, Research Triangle Park, NC. 1998.

⁹⁵ See also 68 FR 18458, 2003 Revisions to Appendix W, Guideline on Air Quality Models.

the 300-450 km range many times. EPA has indicated historically that use of CALPUFF was generally acceptable at 300 km and for larger emissions sources with elevated stacks EPA and FLM representatives have also allowed or supported the use of CALPUFF results beyond 400 km in some cases.⁹⁶ EPA and FLM representatives have weighed the additional potential uncertainties with the magnitude of the modeled impacts in comparison to screening/impact thresholds on a case-by-case basis in approving the use of CALPUFF results at these extended ranges. Furthermore, we note that White Bluff is located within 200 km of Caney Creek and Upper Buffalo. Therefore, we find that ADEQ appropriately considered CALPUFF modeling for White Bluff in the SIP revision. We invite the reader to examine our detailed responses to comments arguing against the use of CALPUFF modeling in making BART determinations in the RTC Document associated with this rulemaking⁹⁷ as well as the RTC Document associated with the Arkansas Regional Haze FIP.⁹⁸ We find that Arkansas' reliance on CALPUFF modeling in the SIP revision is reasonable and appropriate since it meets the requirements of the CAA and the Regional Haze Rule and is consistent with the BART Guidelines and Appendix W. Therefore, we find no reason to disapprove the SIP's reliance on CALPUFF modeling.

With regard to the comment that CAMx modeling would show that visibility improvements from each of the SO₂ controls evaluated are negligible and that SO₂ BART should therefore be the use of low sulfur coal even without Entergy's voluntary decision to cease coal

⁹⁶ For example, South Dakota used CALPUFF for Big Stone's BART determination, including its impact on multiple Class I areas further than 400 km away, including Isle Royale, which is more than 600 km away. See 76 Fed. Reg. 76656. Nebraska relied on CALPUFF modeling to evaluate whether numerous power plants were subject to BART where the "Class I areas [were] located at distances of 300 to 600 kilometers or more from" the sources. See Best Available Retrofit Technology Dispersion Modeling Protocol for Selected Nebraska Utilities, p. 3. EPA Docket ID No. EPA-R07-OAR-2012-0158-0008. Texas relied on CALPUFF to screen BART-eligible non-EGU sources at distances of 400 to 614 km for some sources. See 79 FR 74818 (Dec. 16, 2014), 81 FR 296 (Jan. 5, 2016).

⁹⁷ See "Arkansas Regional Haze Phase II SIP Revision Response to Comments," which can be found in the docket associated with this final rulemaking.

⁹⁸ See "Response to Comments for the Federal Register Notice for the State of Arkansas; Regional Haze and Interstate Visibility Transport Federal Implementation Plan," dated 8/31/2016. See Docket ID. EPA-R06-OAR-2015-0189, Document ID. AR020.0187.

combustion at White Bluff, we emphasize that the issue of what would constitute BART in the absence of Entergy's enforceable measure to cease burning coal in 2028 is not before the agency in this action. We also note that the CALPUFF results are not an apples to apples comparison to the CAMx model results referred to by the commenter due to differences in metrics, models and model inputs.⁹⁹ We discuss this issue and our assessment of CAMx modeling in detail in the RTC Document associated with this rulemaking.¹⁰⁰ In sum, the visibility modeling provided in the SIP revision demonstrates that scrubber controls are anticipated to result in significant visibility benefits.

E. Legal

Comment: EPA cannot approve Arkansas's SIP submission because ADEQ failed to comply with Arkansas's statutory legislative review process for rulemaking by not submitting the Regional Haze SIP for legislative review; the SIP is therefore invalid and unenforceable until ADEQ complies with the law.

Response: It is EPA's position that Arkansas' SIP revision has met applicable requirements for an enforceable SIP, including enforceable emission limitations and other control measures, means, or techniques as well as schedules and timetables for compliance as required under section 110(a)(2)(A). The SIP also includes a program to provide for

⁹⁹ Some of the major differences are: (1) CALPUFF modeling used maximum 24-hour emission rates, while the CAMx modeling used annual average emission rates; (2) CALPUFF focuses on the day with the 98th percentile highest visibility impact from the source being evaluated, whereas the CAMx modeling analysis was focused on the average visibility impacts across the 20% worst days regardless of whether the impacts from a specific facility are large or small; and (3) CAMx models all sources of emissions in the modeling domain, which includes all of the continental U.S., whereas CALPUFF only models the impact of emissions from one facility without explicit chemical interaction with other sources' emissions.

¹⁰⁰ See "Arkansas Regional Haze Phase II SIP Revision Response to Comments," which can be found in the docket associated with this final rulemaking.

enforcement of the measures described above, as required by section 110(a)(2)(C). Furthermore, the ADEQ has shown the SIP meets Section 110(a)(2)(F)(i) through (iii) (monitoring and recordkeeping for sources) and section 110(a)(2)(K) (modeling). Section 169A(b)(2) requires a regional haze SIP to contain such emission limits, schedules of compliance and other measures as may be necessary to make reasonable progress, including a long-term strategy and certain defined major stationary sources to meet BART. ADEQ's SIP revision included Administrative Orders entered between ADEQ and the companies that own the facilities that are required to comply with emission limits and schedules in compliance with the BART and long-term strategy requirements. Based upon all of the above, it is appropriate for EPA to approve Arkansas SIP revision in accordance with section 110(k)(3).

As part of the state's notice and comment period for the SIP, ADEQ received a comment that ADEQ lacked the authority to implement the SIP revision under state law since the SIP (including the Administrative Orders) did not undergo legislative review. The comment further alleged that EPA cannot approve the SIP until the Arkansas legislature has reviewed the SIP revision. ADEQ responded that the SIP did not need to undergo legislative review per Arkansas state law because, among other things, it does not fit within the state's statutory definition of a "rule", rather state law defines SIPs as a plan, the statutory construction of provisions pertaining to plans, and in particular SIPs, exhibits an intent on the part of the Arkansas legislature to create a separate and distinct set of requirements for SIPs, and the SIP is issued by the Director and such action is subject to an appeals process differently from that of a rule. Furthermore, ADEQ has the authority under state law to enter into Administrative Orders to include as part of its SIP revision. These all establish that legislative review is not required for this SIP revision, thereby the state's SIP process met the state's statutory requirements and when the Director issued the

SIP, it became an enforceable document under state law. See Response 33 of Arkansas’ “Responsive Summary for State Implementation Plan Revision: Revisions to Arkansas SIP: Regional Haze SIP Revision for 2008-2018 Planning Period.”¹⁰¹ This is a matter of Arkansas interpreting its state law. EPA finds it is a reasonable interpretation and defers to ADEQ’s interpretation regarding the resulting requirements for the process for state rulemaking for enforceable SIP revisions.

Based on ADEQ’s response to comments explaining the state authority to issue an enforceable SIP revision without the need to undergo state legislative review, we find it reasonable for the state to conclude that ADEQ followed state law in developing and finalizing its SIP revision. Thus, the state’s SIP revision is enforceable as a matter of state law and ADEQ has met the requirements of section 110(a)(2)(A), 110(a)(2)(C), and 110(a)(2)(E) since its SIP includes “necessary assurances” that the state agency responsible for implementing the SIP has adequate “authority” under state law “to carry out such implementation plan” and “responsibility for ensuring adequate implementation” of the plan. It also includes “enforceable limitations and other control measures” as necessary to meet “the applicable requirements of the CAA and includes “a program for enforcement” of the required emission limitations and control measures. Thus, it is appropriate for EPA to finalize approval of ADEQ’s plan since it meets all applicable requirements of the Clean Air Act. We believe it is reasonable to rely on ADEQ’s explanation and interpretation. Moreover, an Administrative Law Judge and the APCEC have also upheld the state’s interpretation of the state law with regards to the issuance of SIPs not being a “rule” including SIPs containing administrative orders and there being no statutory requirement for them to undergo state legislative review. However, we also acknowledge that an appeal process

¹⁰¹ <https://www.adeq.state.ar.us/air/planning/sip/pdfs/regional-haze/public-notice-and-comments-aggregated.pdf>

of the state rulemaking procedures for the SIP revision is still ongoing. When a rulemaking is being challenged, the EPA relies on the current legal interpretation of state law. If circumstances change where Arkansas is no longer found to have followed the state process for issuing the SIP and the Administrative Orders and needs to undergo another round of state rulemaking because the SIP revision is unenforceable, section 110(k)(5) of the CAA allows for EPA to call for plan revisions and sets out timetables for a SIP or FIP revision. This is commonly known as a “SIP call.”

Comment: In its attempt to avoid Arkansas’ statutory legislative-review requirement, ADEQ has repeatedly represented to an Arkansas tribunal that the SIP itself is not actually enforceable. Thus, according to ADEQ, the SIP itself is not enforceable under state law, but only enforceable through separate Administrative Orders. Because ADEQ admits that the SIP revision is not, by itself, enforceable, the SIP is not approvable under the Clean Air Act. 42 U.S.C. 7410(a)(2)(A). EPA cannot approve the SIP revision unless ADEQ corrects the state law deficiencies or provides the necessary assurances that the state plan is, in fact, an enforceable implementation plan.

Response: While we agree with the commenter’s statement that a state must demonstrate that it has the necessary legal authority under state law to adopt and implement an enforceable SIP, we disagree with the commenter’s assertion that Arkansas has failed to demonstrate that it has such authority. According to appendix V to 40 CFR part 51, states are required to submit evidence that they have this authority at the time they submit a SIP revision. Arkansas submitted such evidence. See AR020.0267-003 State Legal Authority to Adopt and Implement SIP.

The requirements that need to be met in order for a state to adopt and implement provisions intended to meet CAA requirements vary from state to state and are governed by state law. The requirements that govern SIP submissions for Arkansas are found in Ark. Code Ann. 8-4-317, and, as explained by the State, there is no legislative review required for a SIP. See pg. 5 of Ex. A. This position does not make the SIP unenforceable. The Director issues the decision and an appeal is processed as a permit appeal. ADEQ is not arguing that the SIP is not an enforceable decision; rather, it is arguing issuance of the SIP does not fall within the state statutory definition of a “rule” requiring legislative review. As explained above, the State has already provided evidence that EPA deemed adequate to meet the requirements in Appendix V. We are aware that the commenter requested an adjudicatory hearing at the state level, as is appropriate, and the administrative law judge ruled in the State’s favor. If it is eventually found by a judge or hearing officer during the appropriate state judicial or administrative process that the Commenter is correct in their assertion that the State did not submit an enforceable SIP to EPA, EPA can issue a SIP call under CAA 110(k)(5) to require the State to correct this deficiency.

In addition, the commenter states that ADEQ’s position is that the SIP revision as a package is not enforceable, only the individual, component Administrative Orders. According to the commenter, since the SIP package as a whole is not enforceable, it does not meet the requirements of CAA section 110(a)(2). We reject that the ADEQ’s position is that the SIP package as a whole is not enforceable, as discussed previously. As explained above, an Administrative Law Judge and the Commission have determined that the issuance of the SIP revision by the Director did not need legislative review in order for the SIP to be adopted and implemented as a matter of state law, thereby making it enforceable.

F. General

Comment: Although public utility plant owners and operators will be responsible initially for installing the pollution controls or taking other actions required under the Arkansas Regional Haze SO₂ and PM SIP Revision, under Arkansas law, such owners and operators are permitted to directly pass through and recover the costs and expenses of installing, operating, and maintaining pollution controls from electric utility customers and ratepayers through electricity rates and tariffs filed with the APSC. In addition, utility plant owners and operators are permitted to recover from electric utility customers and ratepayers the cost of replacement power or capacity needed to replace the premature retirement of electric generating units, or the costs of switching fuel at such facilities. These ratepayers, some of which are providers of goods and services, would be harmed financially if any of these plants were to curtail or modify operations or prematurely close pursuant to the Arkansas Regional Haze SO₂ and PM SIP Revision.

Response: We appreciate the commenter's concerns. We note that the SIP revision submitted by ADEQ did not contain an analysis of the impact the requirement of these controls would have on electricity ratepayers. Neither has the commenter provided such an analysis. There are many factors that could serve to increase or decrease electric rates and absent such an analysis, it is not possible to say what overall effect the SIP's requirements will have on electric rates. ADEQ, in its drafting of the SIP revision, ensured that the requirements of the CAA and the Regional Haze Rule were met, including cost considerations for BART determinations for each of the affected facilities. While we assure the commenter that we are very sensitive to the ramifications of our actions in the regional haze program, we note that we are approving a majority of the Arkansas Regional Haze SO₂ and PM SIP Revision as it meets the requirements of the CAA and the Regional Haze Rule. Our proposal and our final action associated with this

document explain the rationale for our approval. We cannot disapprove a SIP revision and/or substitute our judgment for that of the state when we find that the SIP revision meets all requirements of the CAA and applicable federal regulations.

Comment: Various commenters expressed support for one or more portions of our proposal, including our proposed approval of ADEQ's SO₂ BART determination for White Bluff Units 1 and 2; SO₂ BART determination for Flint Creek No. 1 Boiler; SO₂, NO_x, and PM BART determinations for the White Bluff Auxiliary Boiler; and ADEQ's reasonable progress determination.

Response: We appreciate support of our proposed approval of ADEQ's SIP revision. After careful consideration of all the comments we received, we are finalizing our approval of the majority of the SIP revision without changes from proposal. We identify the portions of the SIP revision we are approving elsewhere in this final action.

IV. Final Action

We are approving a portion of the Arkansas SIP revision submitted on August 8, 2018, as meeting the regional haze requirements for the first implementation period. This action includes the finding that the submittal meets the applicable regional haze requirements as set forth in sections 169A and 169B of the CAA and 40 CFR 51.300-308. The EPA is approving the SIP revision submittal as meeting the following regional haze requirements for the first implementation period: the core requirements for regional haze SIPs found in 40 CFR 51.308(d), including the reasonable progress requirements as well as the long-term strategy requirements with respect to all sources other than the Domtar Ashdown Mill; the SO₂, PM, and particular NO_x BART requirements for regional haze visibility impairment with respect to emissions of

visibility impairing pollutants from EGUs in 40 CFR 51.308(e); the requirement for coordination with state and FLMs in 40 CFR 51.308(i); and the requirement for coordination and consultation with states with Class I areas affected by Arkansas sources in 40 CFR 51.308(d)(3)(i).

Specifically, the EPA is finalizing approval of the following revisions to the Arkansas Regional Haze SIP submitted to EPA on August 8, 2018: the SO₂ and PM BART requirements for the AECC Bailey Plant Unit 1; the SO₂ and PM BART requirements for the AECC McClellan Plant Unit 1; the SO₂ BART requirements for Flint Creek Plant Boiler No. 1; the SO₂ BART requirements for the White Bluff Plant Units 1 and 2; the SO₂, NO_x, and PM BART requirements for the White Bluff Auxiliary Boiler; and the prohibition on burning of fuel oil at Lake Catherine Unit 4 until SO₂ and PM BART determinations for the fuel oil firing scenario are approved into the SIP by EPA. We are also finalizing our approval of the compliance dates and reporting and recordkeeping requirements associated with these BART determinations. These BART requirements have been made enforceable by the state through Administrative Orders that have been adopted and incorporated in the SIP revision. We are finalizing our approval of these BART Administrative Orders as part of the SIP. The BART requirements and associated Administrative Orders are listed under Table 1 below. We are finalizing our withdrawal of our February 12, 2018,¹⁰² approval of Arkansas' reliance on participation in the CSAPR ozone season NO_x trading program to satisfy the NO_x BART requirement for the White Bluff Auxiliary Boiler given that Arkansas erroneously identified the Auxiliary Boiler as participating in CSAPR for ozone season NO_x. We are taking final action to replace our prior approval of Arkansas' determination for the White Bluff Auxiliary Boiler with our final approval of the source-specific NO_x BART emission limit contained in the Arkansas Regional Haze Phase II

¹⁰² 83 FR 5927.

SIP revision. The NO_x BART requirement has been made enforceable by the state through an Administrative Order that has been adopted and incorporated in the SIP revision. We are finalizing our approval of the Administrative Order that contains the NO_x BART requirement as part of the SIP. The NO_x BART requirement and associated Administrative Order is listed under Table 1 below. We are finalizing our approval of ADEQ's revised identification of the 6A Boiler at the Georgia-Pacific Crossett Mill as BART-eligible and the determination based on additional information and technical analysis presented in the SIP revision that the Georgia-Pacific Crossett Mill 6A and 9A Boilers are not subject to BART.

We are also finalizing our determination that the reasonable progress requirements under § 51.308(d)(1) have been fully addressed for the first implementation period. The Arkansas Regional Haze Phase I SIP revision, which we approved on February 12, 2018,¹⁰³ addressed the reasonable progress requirements with respect to NO_x emissions and the SIP revision before us addresses the reasonable progress requirements with respect to SO₂ and PM emissions. Specifically, we are finalizing our approval of the state's focused reasonable progress analysis and the reasonable progress determination that no additional SO₂ controls at Independence Units 1 and 2 or any other Arkansas sources are necessary under reasonable progress for the first implementation period. We are also in agreement with the state's calculation of revised RPGs for Arkansas' Class I areas. We are basing our final approval of the reasonable progress provisions and agreement with the state's calculation of the revised RPGs on the following: the state's discussion of the key pollutants and source categories that contribute to visibility impairment in Arkansas' Class I areas per the CENRAP's source apportionment modeling; the state's identification of a group of large SO₂ point sources in Arkansas for potential evaluation of

¹⁰³ 83 FR 5927.

controls under reasonable progress; the state's rationale for narrowing down its list of potential sources to evaluate under the reasonable progress requirements; and the state's evaluation and reasonable weighing of the four statutory factors along with consideration of the visibility benefits of controls for the Independence facility.

The Arkansas Regional Haze Phase II SIP revision does not address BART and associated long-term strategy requirements for the Domtar Ashdown Mill Power Boilers No. 1 and 2, and the FIP's BART emission limits for the facility continue to remain in place at this time. However, ADEQ recently submitted a SIP revision to address the regional haze requirements for Domtar Power Boilers No. 1 and No. 2, and we will evaluate any conclusions ADEQ has drawn in that submission with respect to the need to conduct a reasonable progress analysis for Domtar. As long as the BART requirements for Domtar continue to be addressed by the measures in the FIP, however, we propose to agree with ADEQ's conclusion that nothing further is needed to satisfy the reasonable progress requirements for the first implementation period. With respect to the RPGs for Arkansas' Class I areas, we will assess the SIP revision ADEQ recently submitted addressing Domtar to determine if changes are needed based on any differences between the SIP-based measures and the measures currently contained in the FIP. We intend to take action on the SIP revision addressing Domtar in a future rulemaking.

We are finalizing our approval of the components of the long-term strategy under § 51.308(d)(3) addressed by the Arkansas Regional Haze Phase II SIP revision, including the BART measures contained in the SIP revision and the SO₂ emission limit of 0.60 lb/MMBtu under the long-term strategy provisions for Independence Units 1 and 2 based on the use of low sulfur coal. We are also finalizing our approval of the compliance date and reporting and recordkeeping requirements associated with the SO₂ emission limit for the Independence facility

under the long term strategy provisions. These requirements for Independence Units 1 and 2 have been made enforceable by the state through an Administrative Order that has been adopted and incorporated in the SIP revision. We are finalizing our approval of this BART Administrative Order as part of the SIP. The SO₂ emission limit and associated Administrative Order for the Independence facility are listed under Table 2 below. We are making a final determination that Arkansas' long-term strategy is approved with respect to sources other than the Domtar Ashdown Mill. We are also finalizing our determination that Arkansas has appropriately provided an opportunity for consultation to the FLMs and to Missouri on the SIP revision, as required under § 51.308(d)(3)(i) and (i)(2).

The BART emission limits we are approving as source-specific requirements that are part of the SIP are presented in Table 1; the SO₂ emission limits under the long-term strategy and associated Administrative Order we are approving for the Independence facility are presented in Table 2; and Arkansas' revised 2018 RPGs are presented in Table 3.

**Table 1. SIP Revision BART Emission Limits and Administrative Orders
EPA is Approving in this Final Action**

Subject-to-BART Source	SIP Revision SO₂ BART Emission Limits	SIP Revision PM BART Emission Limits	SIP Revision NO_x BART Emission Limits	Administrative Order
AECC Bailey Unit 1	0.5% limit on sulfur content of fuel combusted*	0.5% limit on sulfur content of fuel combusted*	Already SIP-approved	Administrative Order LIS No. 18-071
AECC McClellan Unit 1	0.5% limit on sulfur content of fuel combusted*	0.5% limit on sulfur content of fuel combusted*	Already SIP-approved	Administrative Order LIS No. 18-071
AEP Flint Creek Boiler No. 1	0.06 lb/MMBtu*	Already SIP-approved	Already SIP-approved	Administrative Order LIS No. 18-072

Entergy Lake Catherine Unit 4 (fuel oil firing scenario)	Unit is allowed to burn only natural gas*	Unit is allowed to burn only natural gas*	Already SIP-approved	Administrative Order LIS No. 18-073
Entergy White Bluff Unit 1	0.60 lb/MMBtu (Interim emission limit with a 3-year compliance date and cessation of coal combustion by end of 2028)	Already SIP-approved	Already SIP-approved	Administrative Order LIS No. 18-073
Entergy White Bluff Unit 2	0.60 lb/MMBtu (Interim emission limit with a 3-year compliance date and cessation of coal combustion by end of 2028)	Already SIP-approved	Already SIP-approved	Administrative Order LIS No. 18-073
Entergy White Bluff Auxiliary Boiler	105.2 lb/hr*	4.5 lb/hr*	32.2 lb/hr*	Administrative Order LIS No. 18-073

* This BART emission limit required by the SIP revision is the same as what was required under the Arkansas Regional Haze FIP.

Table 2. SIP Revision Emission Limits Under Reasonable Progress and Administrative Orders Proposed for Approval

Source	SIP Revision SO ₂ Emission Limits	Administrative Order
Entergy Independence Unit 1	0.60 lb/MMBtu	Administrative Order LIS No. 18-073
Entergy Independence Unit 2	0.60 lb/MMBtu	Administrative Order LIS No. 18-073

Table 3. Arkansas' Revised 2018 RPGs

Class I area	2018 RPG
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	20% Worst Days (dv)
Caney Creek	22.47
Upper Buffalo	22.51

Concurrent with our final approval of the Arkansas Regional Haze Phase II SIP revision, we are finalizing in a separate rulemaking our final action to withdraw those portions of the Arkansas Regional Haze FIP at 40 CFR 52.173 that impose SO₂ and PM BART emission limits for Bailey Unit 1; SO₂ and PM BART emission limits for McClellan Unit 1; the SO₂ BART emission limit for Flint Creek Boiler No. 1; the SO₂ BART emission limits for White Bluff Units 1 and 2; the SO₂ and PM BART emission limits for the White Bluff Auxiliary Boiler; the prohibition on burning fuel oil at Lake Catherine Unit 4; and the SO₂ emission limits for Independence Units 1 and 2 under the reasonable progress provisions.¹⁰⁴

We find that an approval of the SIP revision meets the Clean Air Act's 110(1) provisions. Approval of the Arkansas Regional Haze SO₂ and PM SIP revision will not interfere with continued attainment of all the NAAQS within the state of Arkansas, nor will it interfere with any other applicable requirements of the CAA.

V. Incorporation by Reference

In this final action, we are including regulatory text that includes incorporation by reference. In accordance with the requirements of 1 CFR 51.5, we are incorporating by reference revisions to the Arkansas source-specific requirements as described in the Final Action section above. We have made, and will continue to make, these documents generally available

¹⁰⁴ Our final action withdrawing part of the Arkansas Regional Haze FIP is published elsewhere in this issue of the Federal Register.

electronically through *www.regulations.gov* and in hard copy at the EPA Region 6 office (please contact the person listed in **FOR FURTHER INFORMATION CONTACT** for more information). Therefore, these materials have been approved by EPA for inclusion in the SIP, have been incorporated by reference by EPA into that plan, are fully federally enforceable under sections 110 and 113 of the CAA as of the effective date of the final rulemaking of EPA's approval, and will be incorporated in the next update to the SIP compilation.

VI. Statutory and Executive Order Reviews

Under the Clean Air Act, the Administrator is required to approve a SIP submission that complies with the provisions of the Act and applicable Federal regulations. 42 U.S.C. 7410(k)(3); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, the EPA's role is to approve state choices, provided that they meet the criteria of the Clean Air Act. Accordingly, this action merely approves state law as meeting Federal requirements and does not impose additional requirements beyond those imposed by state law. For that reason, this action:

- Is not a "significant regulatory action" subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011);
- Is not an Executive Order 13771 (82 FR 9339, February 2, 2017) regulatory action because SIP approvals are exempted under Executive Order 12866;
- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);

- Does not contain any unfunded mandate or significantly or uniquely affect small governments, described in the Unfunded Mandates Reform Act of 1995 (Public Law 104-4);
- Does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- Is not subject to requirements of section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the CAA; and
- Does not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, the SIP is not approved to apply on any Indian reservation land or in any other area where EPA or an Indian tribe has demonstrated that a tribe has jurisdiction. In those areas of Indian country, the rule does not have tribal implications and will not impose substantial direct costs on tribal governments or preempt tribal law as specified by Executive Order 13175 (65 FR 67249, November 9, 2000).

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA

will submit a report containing this action and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a “major rule” as defined by 5 U.S.C. 804(2).

Under section 307(b)(1) of the Clean Air Act, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by **[INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this action for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. This action may not be challenged later in proceedings to enforce its requirements. (See section 307(b)(2).)

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Best available retrofit technology, Incorporation by reference, Intergovernmental relations, Ozone, Particulate Matter, Regional haze, Reporting and recordkeeping requirements, Sulfur Dioxide, Visibility.

Dated: August 28, 2019.

Kenley McQueen,
Regional Administrator, Region 6.

Title 40, chapter I, of the Code of Federal Regulations is amended as follows:

PART 52—APPROVAL AND PROMULGATION OF IMPLEMENTATION PLANS

1. The authority citation for part 52 continues to read as follows:

Authority: 42 U.S.C. 7401 *et seq.*

Subpart E – Arkansas

2. In § 52.170:

- a. The table in paragraph (d), entitled “EPA-Approved Arkansas Source-Specific Requirements” is revised; and
- b. The third table in paragraph (e), entitled “EPA-Approved Non-Regulatory Provisions and Quasi-Regulatory Measures in the Arkansas SIP,” is amended by adding and entry for “Arkansas Regional Haze Phase II SIP Revision” at the end of the table.

The revision and addition read as follows:

§ 52.170 Identification of plan.

* * * * *

(d) * * *

EPA-APPROVED ARKANSAS SOURCE-SPECIFIC REQUIREMENTS

Name of source	Permit or Order No.	State approval/effective date	EPA approval date	Comments
Arkansas Electric Cooperative Corporation Carl E. Bailey Generating Station	Administrative Order LIS No. 18-071	8/7/2018	[[Insert Date of publication of the final rule in the Federal Register] [[Insert Federal Register citation of the final rule]	Unit 1
Arkansas Electric Cooperative Corporation John L. McClellan Generating Station	Administrative Order LIS No. 18-071	8/7/2018	[[Insert Date of publication of the final rule in the Federal Register] [[Insert Federal Register citation of the final rule]	Unit 1
Southwestern Electric Power Company Flint Creek Power Plant	Administrative Order LIS No. 18-072	8/7/2018	[[Insert Date of publication of the final rule in the Federal Register] [[Insert Federal Register citation of the final rule]	Unit 1
Entergy Arkansas, Inc. Lake Catherine Plant	Administrative Order LIS No. 18-073	8/7/2018	[[Insert Date of publication of the final rule in the Federal Register] [[Insert Federal Register citation of the final rule]	Unit 4

Entergy Arkansas, Inc. White Bluff Plant	Administrative Order LIS No. 18-073	8/7/2018	[[Insert Date of publication of the final rule in the Federal Register] [[Insert Federal Register citation of the final rule]	Units 1, 2, and Auxiliary Boiler
Entergy Arkansas, Inc. Independence Plant	Administrative Order LIS No. 18-073	8/7/2018	[[Insert Date of publication of the final rule in the Federal Register] [[Insert Federal Register citation of the final rule]	Units 1 and 2

(e) * * *

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**EPA-APPROVED NON-REGULATORY PROVISIONS AND QUASI-REGULATORY MEASURES IN THE
Arkansas SIP**

Name of SIP provision	Applicable geographic or nonattainment area	State submittal/ effective date	EPA approval date	Explanation
* * *	* * *	* *		
Arkansas Regional Haze Phase II SIP Revision	Statewide	August 8, 2018	[[Insert Date of publication of the final rule in the Federal Register] [[Insert Federal Register citation of the final rule]	Regional Haze SIP revision addressing SO ₂ and PM BART requirements for Arkansas EGUs, NO _x BART requirement for the White Bluff Auxiliary Boiler, reasonable progress requirements for SO ₂ and PM for the first implementation period, and the long-term strategy requirements. We are approving a portion of this SIP revision. There are two aspects of this SIP revision we are not taking action on at this time: (1) the interstate visibility transport requirements under section 110(a)(2)(D)(i)(II); and (2) the long-term strategy is approved with respect to sources other than the Domtar Ashdown Mill.

3. In § 52.173, add paragraph (g) to read as follows:

§ 52.173 Visibility protection.

* * * * *

(g) *Regional Haze Phase II SIP Revision.* A portion of the Regional Haze Phase II SIP Revision submitted on August 8, 2018, is approved as follows:

(1) Identification of the 6A Boiler at the Georgia-Pacific Crossett Mill as BART-eligible and the determination based on the additional information and technical analysis presented in the SIP revision that the Georgia-Pacific Crossett Mill 6A and 9A Boilers are not subject to BART.

(2) SO₂ and PM BART for the AECC Bailey Plant Unit 1; SO₂ and PM BART for the AECC McClellan Plant Unit 1; SO₂ BART for the AEP/SWEPCO Flint Creek Plant Boiler No. 1; SO₂ BART for Entergy White Bluff Units 1 and 2; SO₂, NO_x, and PM BART for the Entergy White Bluff Auxiliary Boiler; and the prohibition on burning of fuel oil at Entergy Lake Catherine Unit 4 until SO₂ and PM BART determinations for the fuel oil firing scenario are approved into the SIP by EPA.

(3) The focused reasonable progress analysis and the reasonable progress determination that no additional SO₂ and PM controls are necessary under the reasonable progress requirements for the first implementation period.

(4) The long-term strategy is approved with respect to sources other than the Domtar Ashdown Mill. This includes the BART emission limits contained in the SIP revision and the SO₂ emission limit of 0.60 lb/MMBtu under the long-term strategy provisions for Independence Units 1 and 2 based on the use of low sulfur coal.

(5) Consultation and coordination in the development of the SIP revision with the FLMs and with other states with Class I areas affected by emissions from Arkansas sources.

[FR Doc. 2019-19497 Filed: 9/26/2019 8:45 am; Publication Date: 9/27/2019]